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Berkeley, California

Stanton Glantz

Stanton Glantz: Putting Cardiovascular, Epidemiological, Economic, Political, and Policy Research into Action at UC San Francisco and Beyond

UC San Francisco Oral History Project

Interviews conducted by
Paul Burnett
in 2021 and 2022

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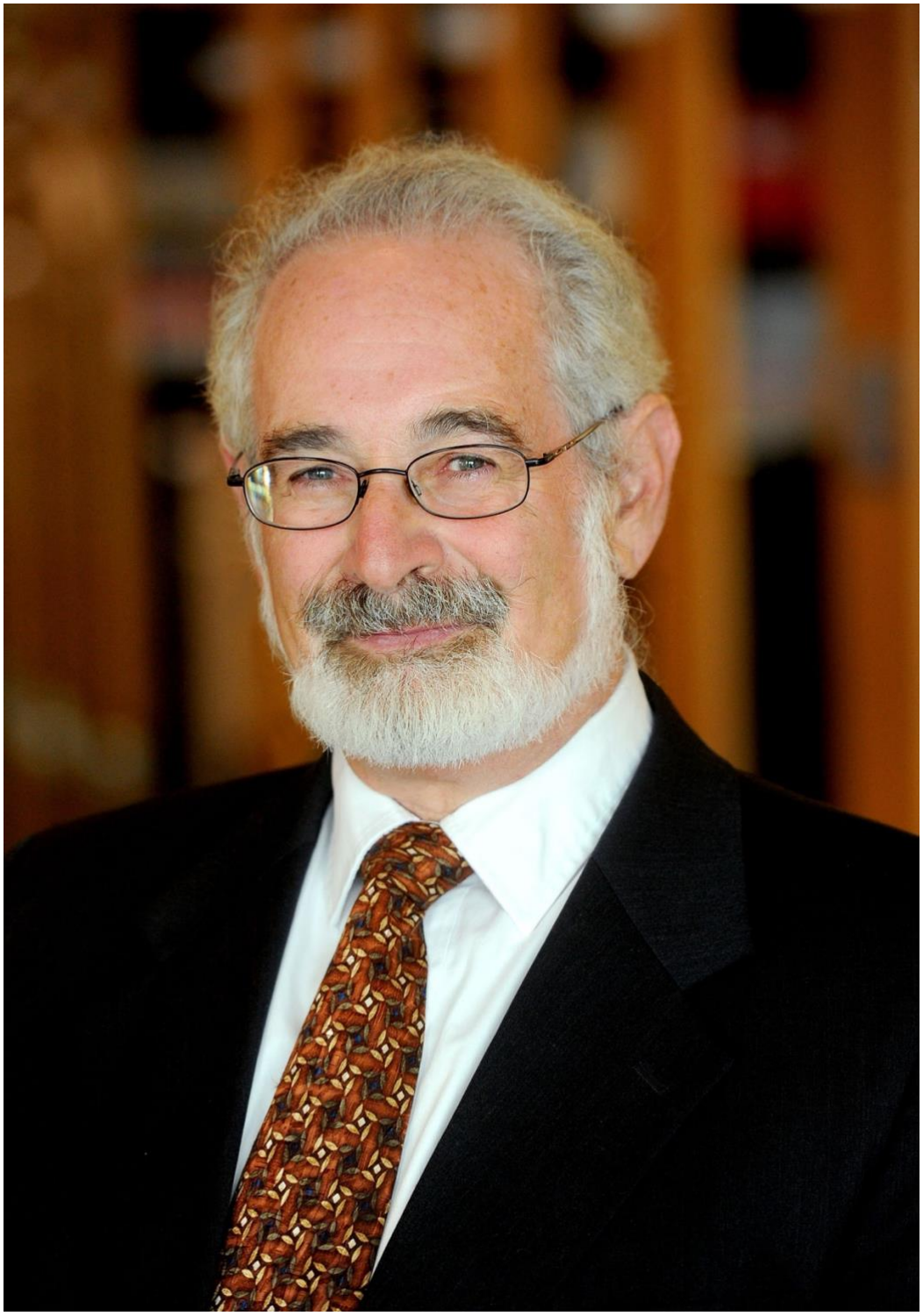

Stanton Glantz, photograph by Noah Berger

Abstract

Dr. Glantz received his doctorate in applied mechanics from Stanford University before embarking on a multi-decade career at UC San Francisco. Dr. Glantz contributed engineering concepts to cardiovascular research, biostatistics to epidemiology, and economics to the study of second-hand smoke and policymaking to regulate second-hand smoke, among many other research projects. The oral history also explores the integration of his political and policy activism and the history of the clean indoor air movement with his commitments to science and public health, in particular his long struggles with the tobacco industry and efforts to make UC San Francisco a world center for research into second-hand smoke, nicotine addiction, and the broader social determinants of health. These interviews also showcase Glantz's applied epistemology, continually reflecting on how knowledge is produced and shaped through formal and informal practices for arriving at scientific truth.

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Foreword

By Bryan K. Slinker
Professor and Dean Emeritus of the College of Veterinary Medicine
Washington State University

So, where to start in writing about the many dimensions of Stan Glantz' scientific and academic life? Which life? Or lives? He has nearly as many as a domestic cat.

Because I first knew Stan as a post-doc working in the area of one of his principal thrusts of basic cardiac and cardiovascular system dynamics and mechanic back in the early 1980s, I'll focus there. The details of that work do not matter that much, I suppose—although the body of science he produced at that time was significant and impactful—because that was several lifetimes ago. But the fundamentals of how he did science framed everything he did from then until now, and modeled for me everything I needed to know to do science well.

Rigor. Attention to detail. Curiosity (although one previous post-doc did banish him from the lab because his curiosity led him at times to twiddle the knobs on the recording equipment during her experiments!). Insight. Cutting to the chase and explaining clearly. Honesty. Collaboration. Innovation; i.e., letting his questions drive the techniques he needed to develop rather than smashing his questions into the methods he already had at his disposal. He was and is a fantastic scientist and advocate for change. It was during my time as a post-doc that *Death in the West* came into one of his lives, and although that was not part of my life, I got a fascinating ring-side seat as he began to shift his focus away from straight-up cardiac mechanics to the effects of tobacco consumption on the cardiovascular system and toward tobacco health policy and control. Although not directly involved, I learned a great deal about how to approach complex problems of any sort, and those were wicked problems at the intersection of biology, sociology, politics, and policy. Although the details were different, the fundamentals remained constant and guided his approaches.

Stan made sure we published high quality work, but the results published from those studies themselves were not what most prepared me. He also clued me in to what statistics was really all about, equipping me for success in ways most of my future colleagues were not; he taught me (and many hundred others) how to understand statistical concepts in ways that made intuitive, rather than dry formulaic, sense to working scientists. his *Primer of Biostatistics* was a revelation; as one reviewer said, "By combining whimsical studies of Martians and other planetary residents with actual papers from the biomedical literature, the author makes the subject fun and enjoyable."). Then he taught me how to teach statistics to others. Throughout my various collaborations with Stan, it was not so much the outcomes of what I achieved, but rather the process of how I achieved, that mattered.

Stan was an uncommonly fabulous mentor to many of us. He got me ready to be a faculty member, and ultimately—although this was no doubt not his intent—a department chair and dean. He did so intently and intentionally because he thought that this was his job. He gave me a lot of freedom. I learned how to critically review manuscripts and grants, which helped me better write manuscripts and grants and hit the ground running. He also thoroughly put me through the wringer when we wrote together. My mistaken thought that I was a decent writer was dashed

quickly when I gave him the first draft of our first paper. What I got back did not have any detailed editing. Rather it only had capital letters written in the margin, "A", "B", and so on. Those of you who know Stan can picture this more easily, perhaps, but all can imagine this guy with a vaguely mad-scientist bearing, wearing a bright orange button-up knit sweater vest, with his feet propped up on his desk, leaning back in a chair … and possessed of a pencil and a Dictaphone. "A" he would write and circle in the margin of the manuscript. "A" he would say into the Dictaphone. Then several sentences of commentary about a particular sentence or string of sentences at that spot in the manuscript. And so on. High-level stuff about argument, structure, and clarity. His assistant would then type this up. The result for that first draft was a single-spaced document, thicker than my double-spaced manuscript, which started at "A" and ended at quadruple "S". This would happen again on a re-draft. And again. And then, maybe, starting at the third or fourth draft he thought it might be good enough to merit detailed editing. The foundation came first, then the polish. I not only became a much better writer, I learned how to use writing as a thinking tool. And I learned from Stan that you never stop trying to become a better writer. From Stan I also learned to read and interpret a faculty manual, having first learned that it was important to do. I learned how to look at a curriculum vita critically. I learned how to network—not just introduced to his network, but how to contribute to and make use of a network.

He became part of my network and he continued to collaborate with, and nurture, me for many years after I left UCSF, even coming Vermont for a sabbatical so we could write *Primer of Applied Regression and Analysis of Variance*. The "whimsy" noted above also permeated this book, leading to a reviewer harrumphing that this was not appropriate for a serious subject—to which Stan decided we should reply that we would keep the whimsy because sometimes there is just too much deadly dull seriousness. Stan taught me that you should have seriousness of purpose and intent, but that this does not mean you cannot have—but indeed rather should have—fun along the way.

For many years I also kept my ring-side seat to his tobacco policy and control efforts, and I still remember vividly our chance call the day after he received the package with the "Mr. Butts" return address containing what would become known as the Cigarette Papers. His excitement reached through the phone line to grab me as he recounted realizing what he had on his hands. That excitement is a huge part of who Stan is, and he brings bucketsful of it to every one of his many lives. It is the fuel for all that he has accomplished.

Foreword

By Pamela Ling
Director
UCSF Center for Tobacco Control Research and Education

I wandered into Stan Glantz's office in the year 2000 responding to an announcement he posted looking for postdoctoral research fellows for document research on tobacco industry marketing practices. We agreed to do a one year research project, which I considered a temporary detour to complement my primary work in HIV prevention. I had no idea this would forever change the trajectory of my career, and that Stan would be the most valuable mentor in my life.

It has been said that Stan's groundbreaking work in tobacco control has probably saved more lives than any other faculty at UCSF. His scientific contributions are legion and long lasting. This oral history gives you a feel for what it's like to work with Stan, and how he has translated his experiences in science, policy and creating programs into his approach to mentoring—the roots of his unique style. His own varied background has led to an embrace of transdisciplinary scholarship that is the hallmark of our fellowship training program; his recognition that rigorous science is our most potent weapon in the battle against the tobacco industry demands excellence; and his ability to discern important research projects that will move policy has launched numerous careers with extraordinary high impact papers. You will also see how fundamental early factors—such as his love of math and statistics and ability to analyze data—translate into powerful statements, ranging from estimating the economic costs of tobacco to financing free public college education in California.

Unlike many scientists, Stan is a warrior, unafraid to stand up to powerful tobacco companies and their advocates, but also a strong advocate for the interests of faculty and students within the university. Stan translates his experience with academic institutions into invaluable advice for trainees on how to negotiate with administration, advocate to journal editors, and navigate funding relationships. Stan's powerful persuasion is in service of the cause, fighting the tobacco industry's relentless pursuit of profit at the expense of human lives, not to promote or enrich himself. His experience as an advocate infused his leadership at UCSF as well as efforts to improve the University of California and public education.

Finally, working with Stan as a mentee is "joining the family"—Stan is always there to counsel and challenge mentees and celebrate their successes. But especially in hard times when faced with powerful opposition, Stan's clear sight and strategic thinking is often exactly what we need. The combination of scientist and warrior is rare and valuable—a "precious mettle" well worthy of preservation in these pages.

As new Director of the Center for Tobacco Control Research and Education, I am forever grateful for Stan's mentorship and inspiration, and strive to infuse his spirit and our identity as "tobacco control crazy people"—celebrating excellence, hard work, and producing the best science, cultivating creative and diverse views, being unafraid to be audacious, intense loyalty, and nurturing a little quirkiness into the fabric of everything we do.

Foreword

By Sharon Y. Eubanks
Lead Counsel for the United States, United States v. Philip Morris USA, *et al.*

Although his reputation certainly preceded him, the very first time that I spoke with Stan Glantz was after it was widely reported in the press that the US Justice Department's historic racketeering case against the tobacco industry had fallen victim to political interference and was at risk of dismissal. I was lead counsel on the case for the Justice Department, and at the time, there were numerous reports of political interference and meddling, as well as requests by members of Congress for Department of Justice Inspector General investigations regarding improper political interference by Justice Department political appointees who were trying to kill the case. This was all following a nine-month trial. Although we had never met or even spoken, amid all of the noise, Stan phoned me and calmly offered his support for our efforts and asked how he might help. He told me a little about some of his own battles with the tobacco industry (as if I had not even heard of Stan Glantz)! Of course, I had no idea of what could be done to help our case survive. Stan asked a few questions, made some suggestions, and of all things, *apologized* for not doing more. He thanked me and our team for hanging in there, emphasizing the importance of the case. Then, in typical Stan Glantz fashion, he went straight to work on getting public support for the case.

Certainly there were others who were helpful, but no one else dared to step into battle openly and so strongly supporting my side against the powerful tobacco industry. And to be sure, no one knew the tobacco company documents better than he. I remember thinking that I was pretty badass at times, but the longer I knew Stan, the more I realized that I didn't even know the meaning of being a true, push-it-to-the-limit, badass. As my mom, who met Stan, once commented on Stan's tenacity, I was not worthy in the badass arena to even hold a light for him to perform under! And the best thing about all that Stan has done and continues to do, is that it never is about him; rather, it is about public health. It is about truth. It is about science. And it is about helping others.

Stan later asked me to become a member of the advisory board for the UCSF Center for Tobacco Control Research and Education (CTCRE). Stan founded the CTCRE and was its first director. Using the collection of millions of tobacco industry documents, under Stan's supervision, fellows authored scientific peer-reviewed papers from the information gleaned from the tobacco industry's internal documents. The research performed at CTCRE by post-doctoral fellows using the collection of tobacco documents has been important in reaching policy makers as well as the public. Many of these millions of internal tobacco company documents were produced in litigation, including my own case. It is wonderful knowing that public health benefits from the research arising out of the use of these documents.

The advisory committee meets once a year, and during those meetings, as an advisory committee member, I met many fellows, learned about the research they were doing, and what they wanted to accomplish next. Stan was a great mentor to all fellows, helping them succeed not only as fellows at the Center, but also in their next jobs after they concluded their fellowships. Coaching them, serving as a professional reference, and mentoring, he spent as much time and effort as necessary to help in fellows in job placement.

Following my departure from the Department of Justice, Stan suggested I write a book—a first-person account from the front lines, documenting what happened during the litigation. I declined several times, but Stan would not take "no" for an answer. As a result, we co-authored *Bad Acts: The Racketeering Case Against the Tobacco Industry.* In creating the manuscript, Stan treated me like one his fellows, reading my chapters and making suggestions. Stan was instrumental in forcing the legalese out of my writing vocabulary, making the book much easier to read. Although it is my personal story, it is *our* book. When I told Stan that I wanted to have him as a co-author, he tried to talk me out of it. By this time, I had learned a lot from Stan, and I would not take no for an answer. I learned a great deal from Stan during my "fellowship."

As Dr. Martin Luther King said, the time is always right to do what is right. The University demonstrates here that Stan's work should be recognized publicly. Preserving the history of a great man's life so far is indeed the right thing to do. The scholarly work and the advocacy of Stan Glantz should be preserved as a fine example of unsurpassed excellence.

Foreword

By Christopher Newfield
Distinguished Professor Emeritus, UC Santa Barbara
Director of Research, Independent Social Research Foundation, London
February 14, 2023

I met Stan Glantz in the fall of 2003 when I began to serve as the Santa Barbara campus's representative to the University Committee for Planning and Budget (UCPB). We worked together off and on, sometimes very intensively, for the next five years. I followed him as UCPB chair and finished the process of Senate acceptance for what we called the "Futures Report." [https://senate.universityofcalifornia.edu/_files/reports/AC.Futures.Rpt.0107.pdf] This was a landmark piece of Senate research that successfully predicted the financial fate of the University of California as its senior management failed to mount an all-out campaign to rebuild the state's contribution to university revenues. This was a dry subject to most people, but not to us. Stan was the first to see that the fate of the University hung in the balance, and that we needed to do everything we could to stave off further privatization. He also made sure that we did do everything we could.

I met him at UCPB's first meeting for the 2003–04 year. It was held on October 7, 2003. That date may not live in history, but it brought the California special election in which Gray Davis became the state's first governor to be successfully recalled. He would be replaced by actor and businessman Arnold Schwarzenegger. Schwarzenegger would soon begin the second multi-year round of major cuts to the public revenues of the University of California and the California State University systems. We didn't know it then, but we were meeting on the day that UC lost the last governor who understood the role of state funding in supporting UC's combination of public access and exceptional quality.

What I did know by the end of that day, however, was that the systemwide Academic Senate possessed an intelligence and, at the time, an authority that could keep the UC Office of the President (UCOP) from pushing the University down undesirable paths—even if it could not forge paths of its own. Instructor-in-chief in this lesson was Stan Glantz, who modeled the thinking and also the behaviors that the senate needed to fulfill its potential as co-governing power with UC's senior management.

The elements of the Glantz practice of shared governance were as follows. First, bring all budget policy and practice into the Senate's purview: governance wasn't really shared if the data underlying policies were hidden. Our agenda on that first day included a review of the Institutes for Science and Innovation that Gov. Davis had funded as an earmark outside of the regular general fund. The administration's position was that academic senate review did not apply to these business-facing institutes, and that in any case review of academic programs did not require budgetary review. Stan, with UCPB chair Richard Goodman, demanded full data sharing. After the better part of a year, UCPB managed to get agreement that the senate would review the ISIs. The principal was as important as the content and results of the review.

This was a second element of Glantzian governance: bureaucratic struggle, which involved political campaigns within a hierarchical institution. If the faculty members identified an

academic program with budgetary issues of any kind, the senate was then to persist, stubbornly and even obnoxiously, to get the facts to do the review.

To read the UCPB agenda of the 2003–08 period is to realize how many of the University's problems in the 2020s were already full-blown issues that the administration never properly resolved. Declining graduate program funding was a problem that we raised with Vice-President for Budget Larry Hershman on a near-monthly basis. Hershman would reply that the legislature has no idea what doctoral education involves, so better to fly this under the radar and fund them through cross-subsidies from other monies. Senate faculty never accepted that one of the country's leading public research universities was not budgeted for the massive number of doctoral degrees that it produced. One early culmination was the June 7, 2005 meeting between UCPB and UCOP budget heads Hershman and Jerry Kissler. Stan articulated the issue in the UCSF context—it was now cheaper for a medical student to go to Stanford rather than UCS, he said—and pushed a process that led to a senate study of graduate funding shortfalls in 2006. Had the issue been faced squarely when Stan and others first made it clear to the administration, UC would be less likely to be struggling in 2023 to pay proper graduate student employee salaries without having to cut the size of graduate programs.

A permanent cuts environment would keep UC from reaching its real potential in a minority-majority state with large numbers of high-achieving students from low-income families. It was what we were fighting against. The state's alternative was no better: in the spring of 2004, the heads of UC and CSU signed a "Higher Education Compact" with Governor Schwarzenegger. It was to run from 2005–06 through 2010–11, would increase the general fund by 3 percent in the first two years while increasing student tuition by two to three times that rate. It would also retain the governor's previous cuts.

The compact was presented by Jerry Kissler to UCPB in our May 2004 meeting as a *fait accompli*. Stan understood immediately that the mandated annual tuition increases were a recipe for privatizing UC's core revenue streams. The following fall, while UCSD's Michael Parrish was chair and Stan was vice-chair, UCPB developed a Draft Resolution on Maintaining the Public Status of the University of California. We then undertook the full-scale Futures Report when Stan was chair in 2005–06, in which we developed four future scenarios for the UC budget depending on the state's handling of its funding obligations.

The Report would not exist were it not for the third element of Stan's practice of shared governance: independent faculty research. We asked UCOP for their data on state revenues in relation to other internal and external revenues. They did not provide us with any. Stan decided that we would therefore take matters into our own hands. We tracked down the data we could get from the public domain. Luckily, California state law requires a fairly decent amount to be publicly posted as UC Financial Schedules and the like. We did our own research. Calvin Moore, professor of mathematics at UC Berkeley, made a major analytical contribution by defining the "core" academic C budget; Henning Bohn, professor of economics at UC Santa Barbara, did heroic Excel data structuring. We conducted our own analysis and wrote a 54-page report on the future of UC's resources under four different budgetary pathways.

We then spent many months developing support for the report from the overall systemwide Senate. We repeatedly presented our preliminary findings to the Academic Council—at least

three times while Stan was UCPB chair and another two or three when I became UCPB chair in the fall of 2006. With each presentation we asked, have we made any mistakes that you see? Have we left anything out? Is there anything wrong with our findings? Each time, we made revisions in response to multiple suggestions. The outcome was a document which represented the voices of every person who saw it in the systemwide Senate, and thus a consensus view of its bodies. It was a lasting triumph of Senate process.

People think of Stan as outspoken, to put it politely. He is also methodical, patient, and accepting of a diversity of views in the pragmatic determination to get the research process to a final and significant product. This is in fact what happened. When we showed the report to Larry Hershman and his budget office, they provided a bit of additional documentation and did not ask for any change. The procedure allowed UCOP to validate our findings without actually helping us get to them.

The two-year procedure led to my presentation of the fifteen minute version of the Futures Report to the Board of Regents on May 17, 2007, with the support of Senate chair John Oakley. The regents found it disturbing, but did not act on its findings. It was the first presentation to the Board of a faculty view of the UC budget. As of this writing is has been the last, which just goes to show that the Senate needs more Stan Glantzes in its midst.

I imagine that Stan talks about the report elsewhere so I won't regale anyone with detail about our four data-based future budget pathways. I will just note the conclusions we started coming to nearly twenty years before I write. We asked what the present and future of UC's core budget was likely to be. We showed that the state had been divesting from UC, which could be seen once revenue charts were corrected for inflation (which UCOP presentations had not). We asked also how UC might make up structural budgetary shortfalls. We offered the regents several choices, suggesting that budgets were in large part an expression of their agency rather than something that happened to them. We proved that the Compact the UC president had signed on their behalf would permanently reduce the fraction of core funds coming from the state. We also proved that "alternative revenue streams"—fundraising, research income, corporate sponsorships, and so on—could not close the gap. We showed them that the only source that could fill the gap was student tuition, rising in large annual increments. We showed that even with large annual tuition increases, the Compact would cut UC's core budget by 25 percent. Finally, we showed them that this would cause hardship for students and their families and cause political problems down the road. We asked how UC could achieve the funding measure of traditional UC quality and answered that only a major increase in state funding could achieve that without creating a massive burden in student tuition and debt. We quantified the state requirement as $700 million in 2007.

UCOP did not seek large increases in state funding, nor did the Board of Regents ask them to. The financial crisis took hold in 2008, and with it came Schwarzenegger's abrogation of the Compact, a new round of state cuts and tuition hikes, and thus intensified non-state revenue workarounds at UC campuses in the 2010s (two leading examples are non-resident student enrollment increases and rapid expansion of high-fee professional masters programs). Since UC's actual public financing levels are below our worst-case scenario, what remains of the work that Stan propelled in the 2000s? Quite a bit.

UCOP did in fact adopt inflation-corrected state funding charts as well as our definition of the core budget. This sounds dull and technical, but it has meant a paradigm shift in making visible the educational budget that serves the essential university missions of teaching and research. UCOP has also been more candid with the Board of Regents about the limitations of state funding, a backhanded compliment to the UCPB-Senate work.

The Glantzian senate practices are still more fundamental. I've mentioned complete data, bureaucratic struggle, and independent faculty research. To these should be added the need to work on behalf of early-career scholars, and to work on behalf of academic freedom (no doubt discussed elsewhere in the dossier). The vision behind this was that faculty must participate fully in the governance of their workplace. They must be able to engage the public directly about what the university does and needs. They must be able to make fair and open collaborative judgments about the material conditions that determine academic outcomes. They must have a willingness to confront superior administrative power. They must see activism as part of their professionalism—activism on behalf of a profession with its public benefits in mind. This activism is not about protecting high salaries or pensions but about protecting the creation of knowledge, the integrity of its dissemination, and the younger teacher-researchers coming up. In performing this kind of professional self-governance, they will need to show some version of Stan's undeflectable persistence.

In the 2010s, Stan brought forward the ideas behind the Futures Report. As the president of the Council of UC Faculty Associations (CUCFA), he organized a new white paper the costs of restoring all three public higher education systems in California to full public status. CUCFA Executive Director Eric Hays, Stan's long-time associate Jono Polansky, and I, along with many others, got involved in writing a "futures" sequel currently called "The 66 Dollar Fix." [66fix.org/policy-paper/] The title refers to the remarkable finding that returning all three systems to their 2001 level of (higher) state funding, allowing tuition to return to zero without budget cuts, would cost the median state taxpayer $66 per year (in 2018 dollars). The report is being updated as I write, and hope springs eternal that it will be taken up by the state's public policy establishment and put into practice.

Were UC's Academic Senate to follow Stan Glantz's practices of faculty governance, the University of California would be a stronger and happier place. The 2000s Senate did follow them long enough for Stan to have made a major contribution to the health of the University today. His example is there, ready to be put to use by new generations of institutional activists.

Interview 1: June 7, 2021

01-00:00:13
Burnett: This is Paul Burnett interviewing Dr. Stan Glantz for the University History series, and this is our first session together, and it's June 7, 2021, and we are here in San Francisco. Welcome, Dr. Glantz, it's great to see you. I wanted to start at the beginning and if you could talk a little bit—tell me when you were born for example, I'm going to start right there.

01-00:00:38
Glantz: I was born May 3, 1946, at Mount Sinai Hospital in Cleveland, Ohio.

01-00:00:46
Burnett: Can you tell me a little bit about your parents and your family background?

01-00:00:51
Glantz: Sure. My father was born in Cincinnati, Ohio, or maybe Covington, Kentucky. My [immigrant] grandparents moved to Kentucky I think. And my mother was the youngest of thirteen children from Hungary. It's not totally clear when she was born, it was either on the boat on the way over or shortly after they got here, and she grew up in Sharon, Pennsylvania.

01-00:01:21
Burnett: Do you know when they came over roughly?

01-00:01:24
Glantz: Um, gee, I think my mother was born around 1920 or so, so right around then.

01-00:01:36
Burnett: Right, right. World War I, the flu, like all of those things swirling around at the time, right?

01-00:01:43
Glantz: I suppose, I wasn't there. [laughter]

01-00:01:46
Burnett: You weren't there. So what was the—your father's and mother's line of work?

01-00:01:56
Glantz: They had done various things, but when I came along and was growing up, my father was an insurance agent, and my mother initially was a housewife, although they'd had a grocery business together before I was born. And later, she became a realtor, a quite successful realtor doing residential real estate.

01-00:02:24
Burnett: Okay. Can you talk a little bit about early childhood, some early memories of growing up?

01-00:02:32
Glantz: We lived in Cleveland until I was in the fourth grade and then my father got transferred, took a promotion moving—and we moved to Toledo where I grew

up and went to high school. And the main story I remember from being little, I went to Canterbury Elementary School in Cleveland, and my mother used to tell the story of coming to the school for a parent-teacher conference and found me out in the hallway, standing out in the hall and said, "What are you doing here?" And it's like, "Well, I'm always out in the hallway," and [laughter] she went to the teacher and said, "Why is my son in the hallway?" And she said, "Because I can't keep him under control," and my mother said, "You either keep him in class, or I'll come sit here and keep him under control for you." So I guess I was always something of a troublemaker. [laughter]

01-00:03:34
Burnett: Do you remember the trouble you—?

01-00:03:35
Glantz: I remember spending a lot of time in the cloakroom too actually.

01-00:03:39
Burnett: [laughs] Was it with other classmates, there were problems, or was it with the teacher?

01-00:03:46
Glantz: I don't remember. I don't even remember it happening, but my mother used to enjoy telling that story. [laughter]

01-00:03:56
Burnett: So you were in Toledo and in the fifties, right, early sixties?

01-00:04:03
Glantz: Yeah, in the late fifties and early sixties. I graduated from high school in 1964.

01-00:04:10
Burnett: Okay. And Toledo, Ohio, in the early 1960s, can you give us a snapshot of that?

01-00:04:19
Glantz: Well, it was still an industrial town. The two big manufacturers that I remembered were Jeep, which was in Toledo and Libbey-Owens-Ford, the glass company. And I remember in middle school or, well then, it was called junior high, in Ohio they called it junior high, going and visiting the manufacturing plants and seeing the assembly lines and massive glass-blowing machines. And Toledo also had a very fine art museum and a zoo that I remember going to. In high school, I got very active in interscholastic speech, I did extemporaneous speaking, which I think really benefited me in the whole rest of my career in terms of learning how to speak. The speech team from high school, Whitmer High School, competed nationally, and I was never in that top, top tier on the debate team, but it was still a tremendous experience. And I was—got—in high school got very interested in science—that was the Sputnik era—and especially in physics, and I remember doing a lot of extra after-school stuff in physics. And also—

01-00:05:52
Burnett: So the school was good, the teachers were good, the programs were good.?

01-00:05:56
Glantz: It was great, it was great. I also took woodshop just because I wanted to learn something different, which has served me very well. I built these shelves, I built a lot of the furniture in our house, remodeled part of it myself, and I think that was the beginning of a kind of attitude of trying to be broad and learn things beyond what you normally would learn. I just found it in terms of informing my whole career and my approach to doing science that breadth is very important, bringing ideas in from outside where you normally would. I was—also got very heavily involved with the high school musical that we produced. There was great teacher, a guy named Paul Slovak who was an art teacher who ran the musical, and we had one of the best musicals in the area. And mostly, I worked on like the stage crew and building sets in that, although my senior year, I actually won an award. I had the comedy lead in *The Pajama Game*—

01-00:07:09
Burnett: Nice.

01-00:07:08
Glantz: —playing a character named Vernon Hines who would go around telling everyone to hurry up all the time, so it was kind of a typecast. [laughter] Years later, I found out that Mitch Zeller who's the head of the FDA Center for Tobacco Products played the same part in his high school musical. [laughter]

01-00:07:28
Burnett: But—

01-00:07:29
Glantz: The performance, the getting over stage fright, and learning how to speak in front of an audience, and reading the audience, I think those are very important skills that informed my teaching and public service activities when I got to being a professor years later.

01-00:07:53
Burnett: Absolutely. Those seem to be really great preparation for just about anything, right, being comfortable in front of folks. So getting self-confidence, was that generally true for all kids? Did you find you were shy, and that you were—you latched on to these things because you wanted to develop self-confidence?

01-00:08:21
Glantz: Well, I was definitely a nerd [laughter] with all that that brings with it. I was certainly not part of the social in-crowd, but that's part of being a nerd. And I don't know, I don't really recall exactly what attracted me to those activities. I was also active in the high school newspaper and also the Boy Scouts, I got very involved in Boy Scouts, I became an Eagle Scout with a bronze palm, and that created a lot of opportunities to learn leadership skills. That's where I

really got interested in camping, which is still my favorite thing to do for vacations, backpacking trips. So, all of that helped build the skill set that served me very well later in life. Exactly, I can't really remember why I—I don't think—as a teenage kid, I don't know too many who are so self-aware that they think, oh, I'm shy, I should get involved [laughter] in the musical.

01-00:09:45
Burnett: No, I think back to my own experience, and I remember being encouraged to do those things because it's—often because it's a great social opportunity, right, the musical?

01-00:09:58
Glantz: Yeah.

01-00:09:58
Burnett: It's this other outlet that it's—these are these unspoken things that are so clear to kids when you're going—and for some, it's sports; for others, it's the science fair. But these are these opportunities—speech and debate another area—where you get to know other kids and you get to develop self-confidence by working with them and relying on one another, and that's just part of that social atmosphere that seems to be being cut back a lot these days.

01-00:10:33
Glantz: Well, yeah. At my school, the debate team was like a big deal because again they—the school competed nationally sometimes. I always liked to talk and again being a nerd, that was sort of the nerd thing to do.

01-00:10:56
Burnett: Talking?

01-00:10:58
Glantz: I don't know. [laughter] But it was a great experience. Years later, my son got very involved in high school speech, and that had a big, positive impact on him. He's now a journalist who started on his high school paper. And—

01-00:11:20
Burnett: Well, you mentioned physics, can you talk a little bit about the attraction to science and how that developed from high school to going to college?

01-00:11:36
Glantz: Yeah, well, I never was that into chemistry, and biology was okay, but I think there was just something about the physics and the underlying mathematics and experiments that we would do that I just found very interesting. And the teachers were all good and—but it's just the physics just particularly appealed to me.

01-00:12:08
Burnett: Mm-hmm. When you were thinking of college, do you have—did you have siblings?

01-00:12:14
Glantz: I have a sister, yeah.

01-00:12:15
Burnett: You have a sister?

01-00:12:16
Glantz: A younger sister who went on to become a teacher.

01-00:12:21
Burnett: Okay. So in terms of what I could call family ambition, in the sense of what your parents want for you or hope for you, was there any shaping towards a future or were you pretty self-directed?

01-00:12:36
Glantz: You know I don't really remember. I was the first kid in my family to go to college, and it was—and I'm Jewish and it's like learning is important and succeeding is important. Other than you need to do well, I don't recall. Neither of my parents had a scientific background; they weren't particularly pushing that. I remember years later when I started publishing in academic journals, my parents said, "Send us your papers," it's like, "Okay. I mean they don't mean anything to you, do they?" and it's like, "Well no, but we know your name," so—

01-00:13:25
Burnett: Right, oh, that's so—

01-00:13:26
Glantz: Years later when I started having my own students, it was, "Make sure you send your papers to your parents." [laughter] And then they'd say, "Well, they're not going to understand this;" it's like, "That doesn't matter, they know your name."

01-00:13:39
Burnett: Right, right, oh, yeah.

01-00:13:42
Glantz: I met a few of the parents, and they all appreciated it.

01-00:13:45
Burnett: Yeah, of course, of course. So they were supportive of going to college. They didn't think, oh, that's a waste of time, and that you should be going to something—

01-00:13:55
Glantz: Oh, no, no, they were—

01-00:13:55
Burnett: —something—?

01-00:13:57
Glantz: It was like the thing to do. It was always something I wanted to do, and I didn't need to be pushed into it. I liked class, I liked learning, and I was just having a good time doing it.

01-00:14:17
Burnett: Great. In that time speaking of the Sputnik era, there's a great enthusiasm around science and technology, especially applied science, right?

01-00:14:31
Glantz: Right.

01-00:14:32
Burnett: Did you think of yourself, I'm going to be a scientist, or did you just—was it more open-ended than that?

01-00:14:44
Glantz: I think it was more open-ended. I just liked the stuff, the sort of sciencey things. I ended up doing my undergraduate degree in engineering, in fact aeronautical or aerospace engineering, which was—but the space program and all that was just very cool.

01-00:15:04
Burnett: Yeah. I can imagine growing up at that time, and there's a lot of science fiction and that thing. So, were there cultural elements that were appealing to you, speaking of—? Today when people say nerd, there's a lot of cultural stuff that goes with that, a consumption of science fiction, and things like that. Was that at all interesting to you?

01-00:15:26
Glantz: Yeah.

01-00:15:27
Burnett: Yeah, okay. So that program, which I was taking a look at, it was the second aeronautical engineering program in the United States?

01-00:15:40
Glantz: Oh, was that? I didn't know.

01-00:15:41
Burnett: Really? Okay. So, this is fascinating to me. It was really interesting, and Orville Wright was involved early on apparently. So, can you talk about this program that you got involved in for your engineering undergraduate? And it's aerospace engineering, can you talk a little bit about the program and how it was connected up to the larger national project of space and missile guidance and all of these different kinds of projects?

01-00:16:19
Glantz: I went to the University of Cincinnati, and they had something called cooperative education. In fact, they invented cooperative education where instead of going just straight through college in four years, you took five

years, and you did your whole first and last year on campus in those traditional, nine-month program, but for the middle three years, you worked a quarter and went to school for a quarter. And the placements were in real jobs, and it was a way to connect the academics and the more abstract stuff with the real world. And it was also an opportunity to really see, is this something you want to do and that you like. And I was lucky enough to get a placement at the NASA Manned Spacecraft Center—now it's called the Johnson Space Center in Houston—where I had just a great experience

01-00:17:24

The guy who ran the co-op program is the students who were in places, a guy named Bud Henderson who is probably the best person ever employed by a personnel division anywhere. And I remember when we came in and were oriented, the orientation was held at Ellington Air Force Base, which was down the road from the main NASA site, which was still—they were still finishing the construction then. And he said, "Look, you're not getting paid enough money to do somebody else's dirty work here, and I want to make sure that when you're placed, that you're learning something and you're getting something out of it. And if you're not, you tell me, and I'll put you somewhere else." And he took a great deal of care in placing people, and I got a huge amount of really great experience working there, and that really informed how I dealt with students when I got to be a professor. I mean there were many times, almost all of them, I probably told them the Bud Henderson story and said, "Look, everybody who homes here is a graduate student or most"—I dealt mostly with postdocs—"I mean, you-all could go out and make a lot more money somewhere else. And if you're taking the time to entrust your future to me and to us, we owe it to you to give you an experience that makes it worth your time." And that was one of the ways we built such a strong training program. And I was involved in creating the joint graduate program in biomedical engineering with Berkeley and then later the tobacco training—the tobacco center [UCSF Center for Tobacco Control Research and Education] and its training program, which emerged probably as the best postdoctoral training program in the world. And it was all this attitude of like we're here to give a good experience.

01-00:19:33

Burnett: Right.

01-00:19:33

Glantz: The opportunities that I had when I worked for NASA were just amazing. I spent my first placement there working in a group where they had built this giant vacuum chamber that was big enough to put the Apollo spacecraft in and simulated a mission to the moon. And just getting all of that together and running through the simulations and the—it was just quite an amazing experience. And from there, I went and worked in a group that dealt with heat transfer. And because you have the spacecraft up there, and half of it is getting huge amounts of solar energy and the other half is facing absolute zero, how do you keep everything normal. And then I ended up in a materials science

group. And back then, I think the mean age of people working at NASA in Houston was something like twenty-nine, and there was this guy who was like fifty or fifty-five who was considered ancient. And everything was computers and simulations and all these modern, emerging engineering approaches. And this guy that I worked for, he had been doing experiments, which was viewed as kind of retro, and showed that if you took materials that were perfectly fine and air and you burn them in pure oxygen, which was what the spacecraft atmosphere was, it was 100 percent oxygen. because they didn't want to bother with all the weight would take to have an oxygen-nitrogen system that would—these things would just burn explosively. And he was writing all these hysterical memos that was going to be a fire, and he wanted some help doing these experiments.

01-00:21:37

So when I showed up, I was cheaper than a technician because I was a student trainee. So they gave me to him and so I worked with him writing hysterical [memos]—doing these burning experiments in a chamber and writing hysterical memos that there was going to be a fire. And then they had the fire on the [launch] pad that killed three Apollo astronauts, and all of a sudden, we became part—very central to the fire investigation. I was nineteen then and there were two people on the whole center who knew how to do fire experiments, him and me. So, I ended up running the night shift and supervising a bunch of people who were a lot older than I was, and it was a really interesting experience

01-00:22:29

And then from there, I went and I spent most of my time working in something called the Mission Planning and Analysis Division, working on Apollo. I worked on three of the Apollo missions and had the good fortune to—when you're looking at bureaucracy, most of it is kind of moribund and then not very efficient—but there are elements of every bureaucracy that actually have to work or the whole organization falls apart. I ended up in a branch that planned the missions, which were all very public. And what happened, it was run by an old-line guy who had come down from Langley, a guy named Ted Skopinski, and it was like a bunch of crazy people who just worked incredible hours and ignored most of the bureaucracy. And they were tolerated by the system because you'd had to have competent people actually getting these missions together and so I ended up in there. And another thing that Bud Henderson tried always too is place people where they were shorthanded because then it didn't matter that you were a student, they needed you.

01-00:23:58

And so I ended up, in addition to several other things, being one of the main authors of what was called an "Alternate Mission Planning Document," which is like if something goes wrong, what do you do. I worked on and helped lead the effort to write the alternate mission plan for the first lunar module flight in earth orbit. It was an unmanned flight to test the module out and test various

emergency things. And actually something went wrong and ended up flying one of the alternate missions that I had designed. It was very empowering, and it really showed you in the shadows when you're trying to make these big, complicated systems work. And I remember, I had—there were a few contractors [from the company TRW] that NASA had working on it, and I was really hammering on them to get everything done on time. And then when then I left to go back to school and they found that I was a nineteen-year-old student basically ordering around TRW employees, apparently there was like a big controversy where the contractor complained to NASA like, "Why are you doing this? Having this kid telling our people what to do?" And it's like, "Well, look you got the thing done early and under budget and it worked, so don't give us a hard time."

01-00:25:37

And the other thing I remember, there were—well, there were more than two, but there were two primary divisions within the center that actually dealt with the missions themselves—the maneuvers that were flown and all of that. There was our division, Mission Planning, which did the orbital mechanics and all the computation and trajectories and stuff and then there was something called the Flight Control Division, and those were the guys who you saw on TV who sat in front of—in the Mission Control Center with all the flashing lights and everything. And one thing that I discovered when I was doing this alternate mission work was that the Flight Control Division had their own set of alternate missions that they just made up without really knowing whether they were physically possible because they didn't do any orbital mechanics; that's what we did. And so I came up with this idea that the alternate missions that the mission planning division planned and the ones that were in what are called the flight rules [prepared by the Flight Control Division], which were the big, thick binders they had of what do you do when something happens, should be the same. Now, you would think this is obvious, but it was a huge political battle in Houston that went all the way up to the director. And in the end, they said, "Yes, these—the missions that mission planning did and the flight controllers planned to actually implement should be the same." So that started giving me some experience in the politics of organizational change. It just seemed to me this is obvious that everybody should be doing the same thing.

01-00:27:36

Burnett: Well, yes. But how did you manage the politics of that and the—? I imagine there was resistance from—

01-00:27:48

Glantz: Oh, yeah.

01-00:27:49

Burnett: —from mission control. You just fly it up to the top and then have the director or—manage that crisis or manage that?

01-00:28:01
Glantz: No, I didn't do it all by myself. The guy that I worked for, the branch chief for our branch, this guy Ted Skopinski, he was a very experienced, seasoned guy. And I was being supervised by regular engineers who work there who were used to fighting for these things. It wasn't just me, but I was the one who started pushing the idea and then the people above me, at least within the section and the branch, thought it was a good idea, and they pushed it through the division. And there was this just huge falderal that ended up—because the people at the working level couldn't agree, it got escalated.

01-00:28:56
Burnett: Right, right. Did everybody realize it? Were you the first to think that—to understand that mission control had their own set?

01-00:29:05
Glantz: Well, everybody knew it. It wasn't secret, but I think people just weren't—nobody that I remember—again, this is years, this is like fifty years ago. But nobody made an issue out of it or at least that I knew of when I came along and said this is stupid and started pushing that everything should be consistent. Because it would make no sense to have the flight controllers who were the ones who were actually in charge when the mission was actually being flown to be telling people to do something that didn't meet the laws of physics.

01-00:29:55
Burnett: They had developed it because they didn't have the bandwidth presumably, they're actually running the flights, they—in their—in the margins of time, they developed their own work-arounds.

01-00:30:06
Glantz: They don't do this during the full mission.

01-00:30:09
Burnett: Right, of course.

01-00:30:10
Glantz: There's a huge planning process that went on for years before the missions except for 8—Apollo 8, which is when they went to the moon and didn't land. That got done in a few months for basically to get the NASA budget through. But most of these efforts went on for a very long time and so these documents that were written, which were called the flight rules, which if you look on TV, you'll see a bunch of binders, and the binders had the flight rules in them for the different systems. Those were developed over a period of months and years leading up to the mission, so it wasn't a last-minute thing. It was just that the people writing the flight—the alternate missions and the flight rules and the people at the Mission Planning Division who were writing—designing alternate missions, they weren't the same, which just made—it made no sense. Because you wanted us to be investing our time on something that could actually be done and would be used, and you want that the things that the

flight controllers were telling people to do to make sure that they satisfied orbital mechanics.

01-00:31:30
Burnett: So, there are two themes that are coming out of this that I think have to do with engineering. The first one is risk, right? You could define engineering as—at least in part as the effort to define and manage thresholds of risk, right? You're building and designing according to an imagined range of risk, right?

01-00:31:57
Glantz: Yes.

01-00:31:57
Burnett: And the other is path dependence with respect to large systems, that they acquire a certain momentum in a particular direction, and the more momentum they acquire, the more difficult it is to move in a new direction. So, you seem to be dealing with both of those core problems of engineering.

01-00:32:26
Glantz: Right. Well, and there's a third related one, and that's making decisions in the presence of uncertainty because in engineering like in medicine for—

[break in audio]

01-00:32:40
Burnett: Sorry for that interruption. So we were in addition to risk and path dependence, there's this third area.

01-00:32:46
Glantz: Yeah, which is make—getting comfortable with making decisions in the face of incomplete information. And that's also an issue that physicians and other health professionals have to deal with. But one of the differences between, say, engineers and basic scientists is basic scientists always have the option of saying, "We just don't know enough to decide." But when you're an engineer, you just are often—that's not an acceptable answer. You have to figure out how to move forward and then either through safety factors and overdesigning things or guessing sometimes—educated guessing hopefully—decide how to move forward. And I think when you come forward to the current battle over e-cigarettes or work I did on secondhand smoke, I was very often pretty out and front of the conventional wisdom. Because I was willing to tolerate a certain amount of uncertainty and looking at how can we take various disparate pieces of information and put them together to get an overall picture rather than looking at things in a super reductionist way.

01-00:34:24
I've had a lot of people ask me, "Well, how—why were you willing to take certain positions" that I had taken that were very controversial at the time that turned out to be right. And I think it was because of starting out in engineering and realizing that sometimes you just have to make a decision because they

can—you just—to decide not to decide is, in fact, a decision too, which a lot of people don't realize and saying we don't know is—that has certain policy and political and practical implications. Now, that doesn't mean that if you don't know you should just bullshit your way through. There are times when you don't know, and I think then the decision is to say, "We don't have enough information to make a decision." And I think it's important to be willing to say that when you can't rather than to just make something up or just leap or take a flying leap and hope it'll work out okay because that leads to lots of disasters. But I think my threshold for being willing to say, okay, I have enough information to say something is probably lower than a lot of other people. And fortunately, I have been able to be—test these things that stood the test of time.

01-00:36:05
Burnett: Working as you were as a very young man, I mean you're nineteen, twenty, twenty-one when you're working at NASA, and working on these—in these areas in which the decisions have some consequences, is there a certain amount of getting comfortable with—? The worst-case scenarios in the Apollo program are pretty bad, right?

01-00:36:35
Glantz: Yeah.

01-00:36:35
Burnett: In many different ways, loss of life of course and massive expenditures, right, for something for which there's a deep investment?

01-00:36:45
Glantz: Yeah.

01-00:36:47
Burnett: Is that part of the story?

01-00:36:50
Glantz: It's also highly public. And in a way, I think my experience there helped me realize how to work when you're—I mean I was just a little cog in a very big machine. But the fact that you're doing things where a lot of people are paying attention and you need to make sure that you get it right, and right isn't necessarily perfect, but, yeah, that was—all of that really informed how I approached a lot of other problems later in my academic career. Plus—

01-00:37:31
Burnett: And—

01-00:37:31
Glantz: —it was just a great time to be there.

01-00:37:33
Burnett: I bet.

01-00:37:34

Glantz: You were part of history, I mean there was just no question about it, you know. In the movie *Apollo 13*, which happened after I left, but there's a scene in there where—the flight controllers were the ones with all the flashing screens in the Mission Control Center. But there were three rooms off to the side of Mission Control where specialists were there to advise the [flight] controllers, and one of them was the flight dynamics room, which is where the people I worked with were. And so there's a scene in *Apollo 13* where they figured out they could use duct tape to fix whatever it was they were fixing, and those were the guys I worked with, you know. [laughter] And it was just very cool.

01-00:38:25

Burnett: Yeah.

01-00:38:25

Glantz: I hated living in Houston. Especially [because] the center was built about twenty miles southeast of town in the middle of a swamp, and it was just awful, but the work as great, and the people were great. The other thing about the branch I was in, it was very interesting because they kept reorganizing. There were different branches responsible for different missions but they—because the branch I was in had a reputation for knowing what they were doing and getting the job done, they kept reorganizing the division so that the next mission always was in Ted Skopinski's branch. So it just created tremendous, tremendous opportunities.

01-00:39:19

And there was also kind of a cowboy mentality. I remember one of my—the other great stories from working there was they—when they would do these missions, as I said, the planning process went on over a period of several years usually. And there were a series of documents produced about the mission from—and the first thing was—the first document was called the "Preliminary Reference Trajectory," and it was a thin, little document that said, here's basically what the mission is going to look like and—because this was before satellite, communication satellites and all that and so in addition to meeting the rules of orbital mechanics, you had to do important things when you can be seen from a ground station. And plus the astronauts had to be able to sleep and so there were a lot of constraints that you had to apply.

01-00:40:19

So the first document was called "Preliminary Reference Trajectory," and it was very thin, and it's like here's what we want to do. And that led to a series of documents to the one that came out right—very shortly a week or two before the mission, which is called the "Final Operational Trajectory," which was much thicker and had a lot more details. And we had two documents going through the system for approval at the same time. One was the "Preliminary Reference Trajectory," for the first Saturn V, mission, which is Saturn V, 360 feet tall, gigantic rocket, and it was an unmanned mission. And

then the second one was the first manned mission, and it was called a Saturn IB, which was a lot smaller. It was basically the upper stages of the Saturn V with people on it. So there were about as different as they could be, one was the preliminary reference trajectory, one was the final operational trajectory, and they got sent through the system for approval with the covers flipped.

01-00:41:29

And it went all the way through, and all these managers signed off on it all the way up to the director, these documents—this is before the internet—got sent out all over the world and then somebody realized that the covers in the sign-up sheets were backwards. So this led to a great deal of embarrassment and so what the division did is they created an office called ATSO, the Apollo Trajectory Support Office, which from the point of view of the guys I worked with, who were—viewed themselves like we're the guys who actually get stuff done, was just like a bunch of losers that had been like they needed to get them out of the way and they put them in this office. But the joke was it would've been fine except they let their phones dial out. And so they came up with the idea that they wanted to approve everything before it went up to the chain of command, and they also started, kind of, meddling in what we were doing. And as I said, you ended up with these increasingly detailed trajectories, which were based on pounds and pounds and pounds and pounds and pounds of computer printout. And the printout was just blocks of numbers, and you just had to know that the third number from the left two columns down or two rows down was the velocity. And they weren't really meant for general distribution.

01-00:43:08

And so when we sent out the documents, they had abridged versions of these detailed trajectories but not everything. And so what would happen that meant like 95 percent of the needs for 95 percent of the people, but every once in a while, somebody would need some number that wasn't in there. And they would call our offices or they would send a memo and then somebody would go look it up and tell them. And what the ATSO people decided is that these highly detailed trajectories had to be published, which was a real pain in the ass because then they had to be made readable to normal people. So it took a huge amount of work to create something that you could distribute that where someone could read it and understand it who wasn't in our little club. And one of my coworkers was so pissed off about this he programmed the system that at random points in this—these things were like hundreds and hundreds of pages—it would say, the first person who calls this guy will get a free case of Lone Star beer. And this just got sent out, it got all signed off by all the people, and nobody ever asked for the beer. That was sort of a lesson that sometimes you need to be practical.

01-00:44:39

Burnett: Right, right.

01-00:44:41
Glantz: But it was wonderful. The other thing that I got to do, one of my roommates worked in the division where they had all the flight—they'd had all of the flight simulators and people that—where they would train the astronauts, and we used to go over there at night and fly them just for that to have fun. And I'll tell you, it was hard. You don't actually a crash into anything, it's all computers, but, boy, it really made me respect those astronauts who were doing docking in particular, that took a lot of skill. I just loved working there, but I hated the weather, and I just found living in the part of Houston we were in, sort of the uncivilized part of Houston. Rice University and all that was way on the other side of town, and that was before the freeways were finished, and so, but anyway, but it was great.

01-00:45:44
But by the time I went off to graduate school in the fall of 1969, I was ready to move on. People were talking about wanting to go to Mars, and I didn't think that NASA was going to get the money to go to Mars anytime soon, and plus, I really wanted to continue to pursue an academic career and become a professor and all of that.

01-00:46:14
Burnett: Well, I wanted to ask you about that, and before we get there, I just wanted to verify something. The aerospace program, is that this guy Widen Tabakoff? Does that ring any bells that name? He was from the US Army Engineering Division Laboratory that was involved in testing Saturn V materials, and he's credited with really bringing the University of Cincinnati's aeronautical engineering into the aerospace space.

01-00:46:46
Glantz: Yeah, he was a professor.

01-00:46:47
Burnett: Oh, he's a professor there, okay. But he wasn't—

01-00:46:50
Glantz: I'm pretty sure—yeah.

01-00:46:51
Burnett: He didn't figure in any of your—the work—study-work that you were doing, that was already well in place by—?

01-00:46:58
Glantz: Yeah, that [cooperative program] had been developed years and years earlier since the University of Cincinnati was where that got invented a long time before. I believe I took a course from Tabakoff on propulsion, I think.

01-00:47:11
Burnett: Okay. The next question is about school because it we've talked about NASA, and this is summer work that you do?

01-00:47:23
Glantz: Half the students went to class in the spring and fall and worked in the summer and the winter, which I was in. And the other half went to work—worked in the spring and fall and went to school in the summer and the winter.

01-00:47:37
Burnett: Okay, okay, so it really was work—it was half your time in school, half your time on the job—

01-00:47:43
Glantz: Right, right, it was—

01-00:47:45
Burnett: —training?

01-00:47:45
Glantz: —very different than what we'd call work-study program in a place like UCSF or Berkeley. I mean you were there as a full-time employee of NASA or wherever else you were. In the good placements, you had good experience, and I was effectively doing the same kind of stuff that like a junior engineer would do. I wasn't just filing things or punching punch cards or something—well I punched punch cards, but it was for projects not because somebody said, "Here, type this."

01-00:48:27
Burnett: Right, right.

01-00:48:28
Glantz: And it was a fantastic experience, and it really—it helped you put the more the—the academics into context to see where it was—what these things were good for.

01-00:48:44
Burnett: Right, right, but as amazing as that experience was for you, there was no trajectory—no pun intended—to continue at NASA or to continue as a professional engineer. You could've stopped with your bachelor of science in engineering and gone on to something like that. What attracted you to the academic path? Was it—?

01-00:49:07
Glantz: Well, I was a nerd, I am the nerd, you know, and I just like going to school and liked learning things. It wasn't like I'm doing all this to become a professor. I thought that was a likely outcome, but just the idea of just continuing to learn and get into other things. I did not expect to end up anywhere even vaguely close to where I ended up and going off to engineering school, to graduate school. I expected to stay in engineering. I got interested in control theory, which is like how do you get the spacecraft from here to there, which was a relatively new—well, I mean, control theory had been around for a long time, but it was really blossoming around. It was crucial to getting rocket ships from here to there, and I just found kind of the

combination of mathematics and physics and doing some kind of real-world thing really interesting.

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And Stanford had a very strong program in that area, and that was one of the reasons I ended up going there. The other reason was the other really hot place was MIT, and at MIT, you had to have a security clearance to take some of the courses, and I had a security clearance from my work at NASA, but I really wanted to get out from under that system. I didn't even apply to MIT for that reason. I didn't realize in going to Stanford that was like the second biggest concentration of military research in academia in the country, [laughs] which led me off into some other adventures at Stanford. Although by the time I got there, there were no classified courses left. There had been demonstrations the year before at Stanford, which led to them ending classified work on campus.

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I don't want to minimize the educational experience that I got too. I mean the courses were generally good. And I got very involved because of my interest in writing, and I got on the staff of—a lot of engineering schools published student magazines, and I got involved in that and ended up the editor of the—it was called *The Cooperative Engineer*, [named after the University of Cincinnati's cooperative work-study program] and used that platform to move beyond bland, kind of isn't-this-cool about engineering stories to talking about more political things and things like curriculum reform. And I got very heavily involved in broadening out the opportunities for engineering students to take non-engineering courses. And I took, I remember, a course in public administration, I took some theoretical math, I took some other history courses well beyond the university's minimum requirements and helped to create a program where engineering students could take—do coursework remotely while you were off on the work part of your assignment. Because I really wanted to learn more than just the narrow or the curriculum because the curriculum is pretty fixed on stuff you needed to know to be an engineer. And I wanted that other stuff too, which is really—it's a little bit like taking woodshop in high school. Some of the coursework I did just because I wanted to broaden out what I knew ended up very important to work I did later.

01-00:53:39

Burnett: And certainly, the skills as an editor. I mean being a good writer is important and public speaking, so communication is important to you, effective communication and to different audiences becomes really important to you.

01-00:53:56

Glantz: Yeah, and learning to speak to your audience. One thing that drives me nuts, like I have some colleagues who are brilliant scientists or brilliant physicians, brilliant engineers, but they give everybody the same talk. And you really have to consider the audience and what do they know, what are they interested in. I remember one colleague who had done a lot of the early work on secondhand smoke and had done some absolutely brilliant mathematical

modeling and estimating how much cancer is it causing, which nobody had done before, so I mean somebody who knows math and modeling and all that. It's like this is so cool. But I saw this guy give presentations to public health workers who went into public health because they hated math, and it even had Greek letters in it which was even worse than plain old math. And I finally said to him, "You just—I thought it was a great presentation, but your audience was just—they were just completely blown out."

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And so it's very important to be able to take what you're doing and translate it into language that will engage the people you're talking to, and I think that's true whether you're talking—teaching a class or whether you're talking to a politician or the media or just other people that you need to be able to calibrate how you talk about a thing. You need to be accurate. You need to make sure you don't say stuff that isn't true or that isn't ridiculously oversimplified, but you need to get down to the—the kind of what do you really want people to walk away.

01-00:55:47

I remember when I was at Stanford going and hearing a presentation by a guy named Alan Cranston who was a [US] senator from California at the time and chaired the Senate Technology and Science Committee or whatever it was called. And I remember him saying is that "I only let one-armed scientists testify at hearings I'm running." Somebody said, "Why?" because people were taking it literally. He said, "Because I'm so tired of hearing scientists say, 'On one hand, but then on the other hand.'" And he said, "If you don't know enough that you—" and this feeds back to the engineering mentality too. If you don't know enough to give me a conclusion, you're recognizing that every conclusion has limitations to it, then I don't want to hear it. Because if what you're telling me is, "We don't know" or "We don't know enough to have a well-formed opinion," just tell me that without getting into all of the, well, this might be the case and that might be the case.

01-00:56:49

Burnett: That is a challenge that we come to in later years with respect to scientific authority when consulting scientists. And scientists are interested in truth, but the truth is very complicated, and that scientific truth is always a work in progress, it's moving towards greater refinement, and there is uncertainty. And in the policy world, there needs to be a threshold or an outcome or results and a rule. There needs to be some kind of outcome that is effective. And I think scientific authority comes to rely on figures who are willing to put a stake in the ground and say, "This is what we know now under these conditions provisionally, but this is what we're saying."

01-00:57:57

Glantz: Right, right. If you're going to move forward, this is our best understanding of what's going on, but there are some times when you can't answer the question too.

01-00:58:06
Burnett: Right.

01-00:58:08
Glantz: I think there's nothing wrong with telling people, "We don't know." I mean, there's a spectrum from "We don't know" to "We're pretty sure this is the case" or—and then in the middle it's like, "Well, this is what we think is going on, but there's a lot of uncertainty." And then you say to the policymaker or to whoever you're talking to, "Okay, well now you know and or is this enough to move forward or do you want to wait realizing that waiting is itself a decision?" And I mean this is when you come all the way forward to like tobacco and environmental issues and all of these science-oriented policy areas where there are financial vested interests on one side of the discussion. As a practical matter, saying, "We don't have information to act" is saying, "Let them keep doing whatever they've been doing without any kind of controls," and there's a price to that. Now sometimes, you don't have enough information to make a decision, and that's just you need to get more information.

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The fact that a lot of people in science want to have a very high level of certainty before they'll say anything really—I don't think they're doing this on purpose, but it's effectively empowering people who are motivated often by bad things. Because you're essentially saying, "Well, let them alone." These business interests, they understand all this, they understand it better than the scientists do. A great example is guns where the gun industry for decades basically stopped the CDC from collecting meaningful data on gun violence. Now that's finally in the last couple of years been reversed, but there's nothing like ignorance to prevent something from happening. I mean the same thing was true with tobacco. Even to this day if you look at the amount of death and destruction that tobacco causes and you look at the NIH budget, the amount of resources that are going into things that could meaningfully affect the tobacco epidemic is still a tiny fraction of the actual health impact. And a big hunk of that is the tobacco industry working through their friends in Congress to say to NIH, "We don't want you messing with this because it's pissing off our friends."

01-01:01:03
Burnett: What is really interesting in the history of science in the United States is the ways in which, as a society and culture, we're committed to science and technological improvement. But you can point to these instances where there's a given group with influence that will pressure the state to prevent science from being undertaken, from—prevent data from being collected, which is the interesting thing whether it's statistics on poverty in the South in the 1940s or—you know? And that's something that we wrestle with. So, the scientist can't act because there's no data.

01-01:01:51
Glantz: Right. Well, it's not just the United States. I mean if you go back to Copernicus.

01-01:01:57
Burnett: [laughs] Right, of course.

01-01:01:58
Glantz: When it was him against the church and so there's always been this tension between—

01-01:02:09
Burnett: Or Galileo yeah.

01-01:02:11
Glantz: —yeah, or that. Yeah, there's always been this tension between the people in power, and science is kind of inherently destabilizing. And one of the things that I tell my fellows and other people is "If you're really doing stuff at the cutting-edge, it's always going to be hard because there's an—you're always going up against some establishment." I remember when I was a graduate student, I read a great social history of physics by a guy named—I think it's Keveles, K-E-V-E-L-E-S I think is how you spell it. He's a historian of science called—

01-01:03:02
Burnett: Dan Kevles?

01-01:03:04
Glantz: Yeah. Called the—oh, that's how you pronounce it. If you go back to the early—late nineties to early twentieth century when quantum mechanics and modern physics was just emerging, all the people interested in that had a terrible time getting jobs because it was just viewed as like too whacko. And I'm pretty sure the frontispiece quote in that book is from Max Plank or something, which just said, "New ideas take effect when the people holding the old ideas die." I think that's a little bit extreme, but it's basically you're always up against some kind of conventional wisdom. And so the fact that you're accused of being controversial just means that you're doing something new.

01-01:03:55
Burnett: Right, right. Well speaking of controversy and conventional wisdom and resistance, I'm thinking of the timing of things. And so you are at nineteen working at NASA, and this is part of this larger cold war demonstrating to the Soviets and the rest of the world that we are not behind in the technology of ballistic missiles effectively.

01-01:04:29
Glantz: Yeah.

01-01:04:31

Burnett: In 1967, you're twenty-one, that's the Summer of Love. In 1969, you're twenty-three or twenty-four, and that's Gov. Ronald Reagan moving students out of People's Park in Berkeley. Can you place some of what you're thinking and doing and learning about in this larger context of kind of social questioning, social unrest, questioning the conventional wisdom. How did Stan Glantz fit into that picture?

01-01:05:15

Glantz: Well, I got interested in space and NASA because it was cool, and I was just so excited to be able to work there. It was being part of history. And it was just so fun. But I in pursuing the position at NASA, by then I really—the other big place to go is the defense industry. While there—yeah, certainly, there's a lot of overlap because they're both rockets, it was a sort of different schtick, and I specifically did not want to get embroiled in the defense industry. And that's why when I looked for a place to go to graduate school, the idea of being—taking courses that were classified I just wanted—I wanted to move away from that. It was also the Vietnam War era, the draft. I was lucky in that I got a medical exemption from the draft because I had asthma, which now I think was probably due to my parents' smoking. So, I tell people, "There are some benefits to secondhand smoke exposure; it keeps you from getting drafted." But even still, that was still hanging there, and then later they went to the military system. And so that was there, it was in the background, but I wasn't involved in any of the demonstrations that went on. I saw them, but I was busy with other stuff.

01-01:07:14

Glantz: Reagan was after I graduated from college and came out here and was a graduate student. My wife was a student of—I was at Stanford, and she was then a student at Berkeley—and she got tear-gassed by [Gov. Reagan's chief of staff] Ed Meese, so I was very aware of all of that. Everybody is a product of their times but I don't—oh, I guess what I was going to say isn't true. I mean, one of the things I did, which ended up another very formative experience, was, there was a huge ongoing fight at Stanford and other universities about military research. As I said, they had had big demonstrations the year before I got to Stanford, which ended classified research [on campus] and spun it all off to what was then called Stanford Research Institute and then later spun off as SRI.

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But there were still demonstrations going on and arguments, and one of the things that really struck me, I thought a lot of the debate was pretty uninformed. And at that point, Stanford had created a program called SWOPSI, Stanford Workshops on Political and Social Issues, which grew out of the demonstrations. And the idea of the SWOPSI program, which was pretty radical at the time, was student-initiated courses on topics of current importance, but there was a high premium placed on high academic quality. And I actually took the first—one of the first, if not the first SWOPSI course,

which was ran by couple of physics students, guys named Joel Primack and Frank von Hippel, and that was looking at the question of science advising to the federal government. Actually, the report that we wrote, the product of these courses was always meant to be a report, which actually Primack and von Hippel later developed into a book called *Advice and Dissent* on federal science advising. And that course actually had a lot of practical import. It had helped build pressure to create something [eventually] called the Office of Technology Assessment to advise Congress on technical issues because at that point one of the problems we identified in the course was that Congress was completely dependent on the administration for science advice. And Nixon was president, and we didn't know if you could trust it. It also led to the creation of the American Association [for the Advancement] of Science Congressional Science Fellows program to bring scientists to Congress and other parts of government. And OTA got destroyed when Newt Gingrich and the Republican Revolution took place in I think 1994, but the Congressional Science Fellows program is still there. In fact, I had a postdoc working for me who her—two postdocs who ended up leaving their fellowships early to become AAAS Congressional Science Fellows. So, it was like while I was sorry to see them leave, I certainly couldn't argue with them. And that actually played an important role in my career development, too, actually many years later.

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But then all of this arguing [about military-funded research], I said, "Well, we really need to—" Because on one hand, you had the faculty saying, "This is all basic science, it doesn't have anything to do with war," blah, blah, blah, blah, blah, and on the other hand, you had the radical element saying, "You're a bunch of baby killers" and especially the engineering school, and I said, "We need to see who's right." And so a couple of years later, I organized a SWOPSI course on military funding of research at Stanford where we wrote two long reports really getting into the details of what was really going on. And a couple of important things grew out of that in terms of—in addition to further engaging me at this sort of—the interface between science and policy and politics. But one of the faculty members who's funded by military research but sympathetic to us ended up being very helpful because after we had gone and looked at all the grants and contracts Stanford had—it was being very detail oriented, and you could speculate about why the military might be interested in a specific project, but it was kind of speculation, and I was talking to this one professor, and he said, "Oh, there's this thing called the Defense Documentation Center," which it was run by the Pentagon on documents. And he said, "Let me put 'Stanford' [as a keyword] in and see what comes out." And so we got this big, thick printout that had every single project the military funded at Stanford together with why they were funding it. And there were also some codes that we figured out keyed into the federal budget, so we could see which larger weapons program each of these things was being funded to support.

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And so we simply published these [funding justifications]. We went to the PIs and said, "What are the goals of the grant?" [Then we published the two justifications side-by-side:] what does the PI say, and what does the defense department say? We called it "Two Perspectives." And there was just an explosion among the faculty over that, and it really forced a lot of people to confront realities [of how their work was supporting military aims] that they didn't like and that they didn't want to admit to and pierced the rhetorical frame that people were using to ignore the implications of what they were doing. And I remember being interviewed many times about that [with questions] like, "Well, what about the Pentagon, what do you think about those guys?" And my answer to that was, "Well, I'm not taking a position on whether I agree or disagree with the policy," but we didn't have any problems at all with the Pentagon. They did not get mad at us at all. It's like, oh, well, we just showed they were doing a good job at doing what it was that they were trying to do. The anger really came from the faculty and the [university] administration on the faculty's behalf for making them confront some unpleasant realities.

01-01:14:33

In fact, one other entertaining story about this is at the time, Mike Mansfield, I think from Montana who was the majority leader in the [US] Senate, and he was very against the Vietnam War, and there was all this noise on campuses about military research with the faculty saying, "This is just basic science, it doesn't have anything to do with the military," blah, blah, blah, blah. And so Mansfield got an amendment put on the appropriations bill called the Mansfield Amendment, which said that the Pentagon could only fund stuff of value to the military. A lot of the academic community was very much against the Mansfield Amendment. They said, "Oh, this is going to destroy science" and all this other stuff. And in fact Melvin Laird who was the Secretary of Defense at the time testified against the Mansfield Amendment saying, "Please don't pass this, we do not want these professors thinking about the implications of what they're doing. Because they're very smart and we need them and we're afraid that if they're forced to confront that, then they might stop doing it, okay." But Mansfield was giving all these speeches saying the Pentagon was ignoring the law and all this and then our report came out saying, "Well, actually, the Pentagon was doing its job, and the real problem was the faculty."

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And so then what happened was one of the students who was part of the group of us doing this report, which dragged on way past the end of the term, and he is sort of an archetypal—he was a physics student, but he looked like a hippie. He had a long beard, long hair, and he rode a motorcycle back to the East Coast to go to a wedding in Washington and just on a lark—and I really wish I could've been a fly on the wall when this happened—went by the Pentagon on a payphone, called the secretary's office and said, "Hi, I'm Norm Albers. I'm working on the SWOPSI report at Stanford with a bunch of students, and can I

come interview you?" And it was like, "Oh, you did that [report] which got us off the hook with Mike Mansfield? Come on down." And I wish I could've been there in with Norm Albers looking totally hippie [on a Pentagon shuttle bus and] wandering around the Secretary of Defense's offices. And he came back with a ton of documents they gave [him], the research planning documents for all of this research. Nothing classified, so we didn't have every single thing but then that gave us an opportunity to have an even more in-depth understanding of how academic research fit into the military's plans.

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And so we wrote a second report about that, and the big argument that the university was using and the faculty were using was, well, it's all about academic freedom. And so, I ended up actually spending quite a lot of time researching the history of academic freedom. It began back against the Catholic Church to protect people who were doing astronomy. But the big push forward actually grew out of Stanford in the first part of the [twentieth] century because Leland Stanford was the guy who drove in the golden spike, he made his money on railroads. And there was an economics professor at Stanford writing and advocating socialization of the railroads, and he was fired. And that actually led to the creation of the American Association of University Professors to try to protect faculty from these powerful economic interests.

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And so really if you actually know something about academic freedom, it had nothing to do with funding. It was about basically insulating the academic enterprise from these powerful economic and social forces. And we then put forward the argument that, in fact, the real enemy of academic freedom is not the Pentagon, because they're just trying to do their job or the radical students who are just expressing political views; it was the university's administration, basically by instituting a policy called salary offsetting, where in order to get promoted, you had to raise a certain fraction of your salary from extramural funds, which forced people into doing the bidding of these external economic interests. And, of course, the administration was very unhappy with [us saying] that.

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And so years later when we got into these arguments about, which we'll talk about later, the fights over military funding at Stanford, all of this got replayed thirty, forty years later at the University of California when I was very active in the [academic] senate. And really coming to appreciate how all of these different pieces tied together and that got me interested in the history of science and stuff like that. In fact, there's a footnote in the book *The Physicists* [Daniel Kevles] about this study, which was I think the first time my work was ever cited. All of this comes together and informs the later work that I did in public health. But even the basic science stuff I did as a faculty member around cardiovascular function, a lot of that at the time we did it was wildly controversial too; now it's all conventional wisdom. But talking about the

importance of how the heart fills and the interaction of the different chambers of the heart, nobody had really been thinking much about that till we came along.

01-01:21:16
Burnett: Mm-hmm. Well, I do want to talk about that, and I just want to—

01-01:21:24
Glantz: Maybe that's later. I mean I agree to do it now too, but that's maybe for the other session.

01-01:21:28
Burnett: Well, I just want to clarify a couple of things about this and you mentioned—it was salary offsetting, was that the phrase?

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Glantz: That's what Stanford called it. They didn't do this for English teachers, but if you were in the engineering school or physics or math, they expected you to bring in a certain [fraction]—I think it was a third—of your salary from external sources, and if you didn't, you just didn't get promoted.

01-01:21:56
Burnett: It also seems to be part of postwar—the kind of postwar science compact, right, Vannevar Bush's idea that there's this pipeline problem. European researchers are down for the time being, and we need to fund the basic research—"we" meaning the state. Scientists need to be in charge of evaluating the value of this kind of work, so you had the National Science Foundation. But the Office of Naval Research was huge in the 1950s and into the 1960s funding really broad—the breeding activity of mosquitoes in the desert [for example]—and so it's got nothing to do with the navy per se, except when you're—if you think about—you can think about applications for a lot of basic research, right?

01-01:22:57
Glantz: Right. That was the argument that this is all just a payback for all the important contributions in radar and sonar and the atomic bomb and all that [in World War II]. But that's not really an accurate representation of the situation as it existed in the early seventies because that's what happened after. I went back and read all that stuff and the—it is true that after World War II, Vannevar Bush wrote *Science, the Endless Frontier* and basically said that, that we are benefitting from all of this basic science and that the well has been—kind of gone dry because all the basic scientists have been busy doing all this applied technology [to support the war effort], and we need to get it [basic research] going again. And so in the early postwar years with the creation of NSF and even the Office of Naval Research and some of the other stuff going on out of the Pentagon, the conventional wisdom [in academia] of the seventies was it was all driven by scientists not really connected in any kind of direct way to any kind of military applications.

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But that situation changed, and there were a series of shocks to that. The first one was the Korean war, and it was like, well, we know want this to have all this pure science, but we've got this war going on, and there are some things we [the military] needed. So, there was this push toward more applied stuff and then it receded a bit, but it did not go all the way back. And then you had the cold war, which went on for a very long time and then you had the Vietnam War, and at each step, things became much more targeted. And the Pentagon, and in fact we have this great testimony from the Secretary of Defense Melvin Laird saying, "We want scientists to keep thinking it's 1946, and the pre—the '46 to 50 period. That's how we want them to think about it because we don't want them thinking about the ethical implications of what they're doing." He was explicit about that in testifying against the Mansfield Amendment. The first set of material we got from the Defense Documentation Center was—it was not quite a "he said, she said" but kind of, because this professor said we're studying aggressive behavior, the famous Philip Zimbardo experiment, because that was funded by the military. And he was an outspoken anti-war critic, and yet—we can look it up in the report—but his thing was like "understanding the rewards of aggressive behavior." The Pentagon was like "techniques for controlling unruly behavior among military recruits," that's what they said.

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And the point was when you read what the professors were saying and what the military was saying about why—where they're talking about the same project, in almost every case, they were both right okay. It was just a question of the fact that the professors weren't willing, most of them, to confront the reality of what was going on. The thing we accomplished with the second report after Norm Albers got all these planning documents, program planning documents was that you could see the overall superstructure. And again, the stuff that was being done was, the scientific justifications were—I mean we're not saying the professors were lying about it, but they weren't really confronting the reality of what they were doing.

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I remember another one that was some kind of project about rotor aerodynamics, and I don't remember the academic title, but the military's thing was ways to make helicopters quieter while they sneak up on Viet Cong. The other thing, at Stanford, we did not have problems with the conservative faculty. It's like, "Yeah, I'm conservative, I think the Russians are a huge threat, I'm worried about Vietnam and the domino theory, and, yeah, I want to help make America strong." The places, the people we had all the problems with were the liberals who just did not want to confront the reality of what they were doing.

01-01:28:02

Burnett: I'm straining to remember this. There's a book by Joy Rohde about social science research and the defense department [*Armed with Expertise: The*

Militarization of American Social Science Research. 2013]. And there's a scandal that blows up in the—I want to say—early to mid-sixties about social science research into the point at which a polity becomes revolutionary, right? And so, if you could understand the mechanisms of that, you could do something about it operationally. And there was a big scandal because this was exposed, and the solution was that social scientists who wanted to continue working in this kind of operational or quasi-operational area spun off out of American University into something called the Special Operations Research Organization or SORO. And that happened I think earlier. There were scandals in the university. The math department got bombed in the University of Wisconsin if I remember?

01-01:29:20
Glantz: Yeah.

01-01:29:21
Burnett: And that was 1970, because of its ties to army research. They had some contracts with the army. There was awareness or there were accusations from the press and from advocacy organizations, say, accusing the university of being in bed with the military, and there were these plausible denials I guess. What you're referring to are these kind of two sets of books, right?

01-01:29:52
Glantz: Right, right.

01-01:29:52
Burnett: So the faculty have their—this is my application to the Department of Defense and this was what I was trying to do, I was looking at this particular scientific problem. And you're saying that the Defense Documentation Center kept a second set of books that had the rubrics for evaluating these applications.

01-01:30:12
Glantz: Right. I mean what the DDC documents gave us was the specific reasons that they funded every project. It wasn't a dual set of books; it was like, if you're sitting inside the Pentagon trying to decide who to give money to, it's like, well, why is it worth our while to fund this project? That's a perfectly legitimate thing for them to do from their point of view, and they weren't trying to hide anything. And as I said, none of these things were classified. We just didn't know they existed until this one professor said, "I'm just going to put Stanford in and see what pops out," but it's a matter of being responsible. Again, the conservatives on the faculty were like, "Yeah, I'm doing that; that's why I'm doing it." And I think it's a matter of if you're going to do something, you have to take responsibility for it and you have to be held accountable. And if you're willing to do that, and you want to do something that is unpopular, fine, let them do it.

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In the end, the case we made or tried to make was that the problem wasn't military research per se as long as it was—I mean classified research raises a

whole other set of issues about free speech and free exchange of ideas and stuff like that. But the classified research was already off the campus. The real question is the [university] administration, without saying it, was putting huge pressure on the faculty, and by implication, the students, to do military research if they wanted to make it. Because if somebody came up with some other idea that didn't fit within the priorities of the Pentagon—I mean there were other funding sources but—and for the engineering school at that time, mostly the Pentagon and to a lesser extent—the NSF is a much smaller operation—then they just didn't get promoted. And so, there was this sort of Darwinian selection going on that effectively pushed people out who weren't fitting into the priorities of this external agency, and we argued that that flies in the face of academic freedom. The idea of academic freedom was developed was to insulate the academy from exactly those pressures, and they were being amplified internally.

01-01:32:58

Burnett: So, it wasn't so much the decision on the margin of the professor who's applying for—? So they were applying for DOD money, and they knew it, and they were saying, "Well it's just—this is really basic science, so it's not—?" So that's one issue but your—the purpose of this particular SWOPSI project was to expose an ecosystem.

01-01:33:26

Glantz: Well, and it didn't start out that way. The purpose of the project was to figure out what was going on. We didn't have a hypothesis going into it. It was like, well, we have these two sides making these arguments, neither of which is based on much evidence, and the question is if you look at what's going on in a systematic way, what can you say?

01-01:33:55

Burnett: Right.

01-01:33:55

Glantz: This argument about the ecosystem and the control of the ecosystem, that emerged out of the work. If you went back and dug up our original application for the course, I'm sure there's not a word in there about academic freedom. As I said, we started out looking at the—the first step was to just look at all—every single one of the grants, and what could we say is intelligent, informed people who knew something about military technology. But then the Defense Documentation Center took the guesswork out of it. And then later when we got the planning documents for the different military research branch programs, then you could see the overall superstructure and you know by then—

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The other argument we were hearing and you still hear this today—you go up to UCSF, you hear it from people who aren't doing military research—it's like, "Well, NIH doesn't care about this right now or donors don't care about this

right now." And I think it's a big problem because, again, I'm not against people getting philanthropy, I'm not against extramurally funded work, but what's the institution doing to protect the people with ideas that don't appeal to any of those guys? Because that's what the university evolved to do. It didn't evolve to be a contract research operation. There are all lots of [independent contract research] institutes out there that do that. It [the university] evolved to be a place to protect people developing weird and potentially unpopular ideas that later could become important.

01-01:35:52
Burnett: Right. A true pipeline instead of one that has the biggest possible watershed to continue that metaphor, right, so that it's not just knowing in advance.

01-01:36:03
Glantz: A great example of this is—I can't remember the woman's name. She became the head of Obama's Council of Economic Advisors. She was a Berkeley professor in economics.

01-01:36:17
Burnett: Yellen?

01-01:36:18
Glantz: No, it wasn't Yellen.

01-01:36:19
Burnett: Oh, Yellen is now, yeah.

01-01:36:22
Glantz: It was another woman but it was—she—

01-01:36:24
Burnett: Oh, Christina Romer.

01-01:36:26
Glantz: Yeah. I mean what did she study? The Depression, the economics of the Depression. Well, if you looked in the boom times, what could be more stupid and irrelevant? I've never met the woman, but I'm sure a lot of people, you'd go to party, and they'd say, "What do you do?" and, "Oh, I studied the Depression," and people would say, "Oh, well, that's useless" but—

01-01:36:55
Burnett: Until it comes around.

01-01:36:56
Glantz: Until it comes around. And I think one of the things that universities are there for is to protect useless things that suddenly become important or stuff that seems kind of abstract than academic until it's not. And so, the big issue that we raised with Stanford, which I think still applies to universities all over the place, is this pressure to get your own funding, to essentially turn the university into a job shop. You can justify it on the grounds of economics, and

it's a way we can grow, and a way we can pay the bills and we—lots of good work gets done and all that, but you can't justify it in the academic freedom grounds. And my big beef with a lot of people who talk about academic freedom is they think academic freedom it's like Citizens United [Supreme Court decision overturning campaign finance limits]: academic freedom is the freedom to chase whatever money you want, and that's not true. That's not where the idea came from. The idea came from protecting thinkers who were doing things that were either irrelevant or counter to the interest of powerful forces in the society.

01-01:38:35
Burnett: Well, we should keep that theme going as—

01-01:38:38
Glantz: Oh, yeah, it will come back.

01-01:38:39
Burnett: —it comes back, and there's been an evolution in thinking too around that. I'd love other your commentary on that, because there were folks who much more aligned with your analysis of that in the seventies who now—even at UCSF—have a slightly different view of it. They feel [that outside pressure] hasn't been as threatening as they imagined from their perspective. But I'd like to hear your commentary on that—

01-01:39:14
Glantz: Right, well, we can come back to that.

01-01:39:15
Burnett: Yeah, absolutely. So just in the time line, the original—the announcement of the original two-volume study of DOD support of Stanford is called "Stanford and the Pentagon," and that came out in 1972 in the journal *Change*. And it concludes that academic freedom, the university's integrity, and the process of discovering truth needed to be restored in face of increasing dependence on researchers on outside sources of support, so that's that work. And you've noted in this that you're disappointed that the report was never taken up or was not at the time taken up by the Committee on Research Policy, which was Stanford's review organ. I'll pose that as a question, was there a kind of backlash, say, at the college of engineering?

01-01:40:15
Glantz: Oh yeah, oh, they were very angry, yeah, yeah, no question. [laughter] Years later, so I finished my PhD and I ended up—

01-01:40:39
Burnett: What year is that?

01-01:40:40
Glantz: I think it was '73 or—

01-01:40:43
Burnett: Yes, correct, yeah.

01-01:40:45
Glantz: And so, what happened then, the economy was terrible. Until they started saying that the economic turndown in 2008 was the worst since the Depression, they were saying it was the worst since the early seventies. And I ended up doing my thesis on how heart muscles works, and how I got from [spacecraft] guidance and control to that, I can tell you that story in a second. I went out and was looking for a job, and I actually had a couple of strong leads taking the cardiovascular stuff I had gotten into and getting jobs in engineering schools, but it was all directed more toward instrumentation. Echocardiography was just really coming into its own then, and one of the jobs was like working in that area and developing that technology, which was something that was being used for—to measure some of the stuff I was studying. And I thought about it, and there was nothing wrong with the job, and I didn't have any ethical considerations or anything, but I decided I really was more—at that point, had gotten more interested in the biology side than the instrumentation side.

01-01:42:17
And then an opportunity came up to be a postdoc in cardiology at Stanford. I was the first nonphysician postdoc they ever had. They were attracted by the kind of biomechanics and trying to bring engineering thinking into cardiology, which back then was a pretty radical idea. By the time I was getting close to finishing the postdoc and starting to look for a job, one of the people I got to know who was a mentor to me was a guy named Harold Sandler who was then [head of] biomedical research at NASA Ames, and he said, "You have to get out of Stanford." He said, "They still hate you for the SWOPSI report years later. There's no way they're going to agree to give you a job there, and you should really go to UCSF." And he even gave me a little $5000 grant [to study biomechanics] that I could go wave around in front of UCSF as a way to help get in the door.

01-01:43:19
So, I came up here [to UCSF] and spent a couple more years as a postdoc, which at the time, I was very unhappy about because back then and even today in engineering, postdocs were relatively rare, and here I was stuck doing two of them. But I remember Hal saying to me, "No, no, this is the best thing that ever happened to you because it's going to give you time to further get your research identity developed." And I remember I said to him, "Yeah, that is only—second only to bubonic plague." But he was right because what it did is it gave me two more years of protected time to really get myself established and moving [as a researcher]. And I ended up making a full professor a lot faster than many of the people I finished my PhD with because I had that period of really concentrated research work and publications to really get things going.

01-01:44:18

In fact, I had an NSF graduate fellowship at Stanford, which I think ran for three years and then when that ran out, my advisor said, "We'll get you a teaching assistantship to help you finish up your thesis," and the administration would absolutely not permit that. The paperwork was kind of working its way through, and they said, "No, we'll find a professor to teach this eight o'clock class" because they really did not like me.

01-01:44:55

Burnett: Hmm, so there were early consequences for you for standing up?

01-01:45:00

Glantz: Yeah, but that's life, you know?

01-01:45:03

Burnett: Yeah. So there was this initial report and then in '74, two years later, you published with Norm Albers, and that's the hippie, is that right?

01-01:45:14

Glantz: Yeah.

01-01:45:14

Burnett: Okay, [laughs]

01-01:45:15

Glantz: Yeah, who ended up becoming a piano tuner the last I'd had heard.

01-01:45:20

Burnett: Okay, so you published in *Science* about—

01-01:45:23

Glantz: Which really pissed off the [university] administration to be in one of the most prestigious journals in the world.

01-01:45:31

Burnett: I was going to say, so a difference—

01-01:45:33

Glantz: Oh, they were extremely unhappy about that.

01-01:45:36

Burnett: Okay, okay.

01-01:45:38

Glantz: And then we had published these two reports [*DOD Sponsored Research at Stanford, Volume I: The Perspectives and Volume II: Its Impact on the University*], which I can show you. One [Volume I] which was just a compendium of all the studies and then this report [Volume II] that was the analysis. So, we kept working on this over a period of a couple of years after the course ended. But the other thing I learned out of this is if you're going to piss people off, you need to be right. You need to do work, which is as

bulletproof as you could make it, and you need to get it into prestigious venues where they can't just blow you off.

01-01:46:25
Burnett: So you, at the same time, pursued this interest and primary research passion into the biomechanics of the heart, right?

01-01:46:39
Glantz: Yeah.

01-01:46:40
Burnett: And you land at UCSF, '74 to '77 is this timeframe for the postdoc years.

01-01:46:48
Glantz: Yeah.

01-01:46:48
Burnett: Did you run into Les Benet there in pharmacy?

01-01:46:53
Glantz: Yeah, oh yeah, yeah.

01-01:46:54
Burnett: Because he was working on pharmacokinetics and bringing chemical engineering concepts into pharmacokinetics, I mean basically that notion of how drugs move through the body.

01-01:47:06
Glantz: Right.

01-01:47:09
Burnett: Can you walk me through some of the conversations that you're having, or are you kind of more insular in saying I need to get my research imprint established?

01-01:47:21
Glantz: Well, I talked to him and in fact did some—I mean the pharmacokinetics, and this is an example I think of this cross—the importance of cross-disciplinary work. Pharmacokinetics from a mathematical point of view, at least at that point, was pretty simple-minded differential equations. But if you knew how to do it, you were like a magician. And so I actually, when I was a fellow at Stanford, coauthored the first big review of antiarrhythmic drugs, which were just coming online then and wrote about the pharmacokinetics because I understood the math of it, which again from a—if you're a math major and even engineering major, that stuff is like introductory differential equations. But for the physiologist, it was all some mysterious, new, super high-tech thing. I remember talking to Benet about that. I wouldn't classify what I was doing so much as insular as just different because the kind of modeling that I was interested in, I had moved when I was a postdoc at Stanford from isolated cardiac muscle to whole hearts and was doing more mechanical modeling.

And then when I came up to UC, the guy who was the head of cardiology then was a guy named Bill Parmley, a very, very famous world-class cardiologist, international leader but a super nice guy. And his undergraduate degree was in physics and so he really liked all this math-y stuff I was doing, which is why he took me on as a fellow and then that led to me joining the faculty later. But most of that was really focused on the mechanics of how the heart worked as a pump, although I continued to do a little bit of the pharmacokinetics. But there were a small number of people at UCSF who were taking a more math-y approach, and that was how I got to know. I didn't know him real well, but I got to know him a little bit.

01-01:49:48

Burnett: That's kind of what I'm thinking of, not specifically your contact with him, but what's going on at UCSF in welcoming people from—who have backgrounds in other disciplines.

01-01:50:01

Glantz: I think UCSF was very progressive. The fact that they thought somebody like me was worth having in the Department of Medicine, the fact that they were willing to give me a full-blown academic appointment. It was an in-residence appointment initially and I—there were some interesting stories to tell about that too that we can get to. But that they were even open to the idea. If you went to most of other leading academic medical institutions, there would have just been no opportunities for somebody like me. Whereas there was a much broader appreciation for the idea of bringing basic science and other approaches into clinical medicine. The Cardiovascular Research Institute, you know what that is?

01-01:51:01

Burnett: Mm-hmm.

01-01:51:02

Glantz: That was the first organization like that anywhere I think, certainly inside the University of California. And the idea of bringing together the—in a very close collaborative way, nonphysician experts with physicians with the idea of improving patient care was a pretty radical idea back then. I really liked that because it was sort of an engineer—kind of thinking like an engineer about health problems. And in fact, one of the problems that UCSF faces today, especially with the advent of the Mission Bay campus being so far away [from the Parnassus campus and the hospital there] is that that connection isn't as strong it used to be. It's being rebuilt, but there was a period in there where the focus was on generating clinical revenues.

01-01:52:09

One of the things that always pissed me off when Lee Goldman was chair of [the Department of] Medicine, who was very oriented toward money, was that even though by then I was a full professor, I was extremely well funded. In fact, I think at some point, I had the second largest set of extramural funding

of anybody on the campus. I don't know for a fact, but I was told that. And I've never been actually going out chasing money per se; it [having so much grant money] had just happened. But according to his accounting, which was sort of salary offsetting and extremist, I was the drag on the department's finances because my FTE didn't generate overhead, and that's just always pissed me off. In the last few years, there's been a restoration in some quarters of the idea of bringing this back together, but I think it's [the collaboration of researchers and clinicians that] really what built the place.

01-01:53:15

There was an opportunity for me there as a regular member of the faculty, and I had—many times I would get asked by people at other places, "Well, you're not a physician, are you a second-class citizen, do people look down on you?" and the answer to that was always, "No." I was treated as an equal, as a colleague, and they made more money than I did because they can see patients but in terms of intellectually, it was a very even playing field. And in fact at times, they were coming to me as sort of the quantitative magician.

01-01:53:53

Burnett: But it was a really generative kind of model of bringing different—people with different disciplinary backgrounds together to work on a common problem like the heart for example?

01-01:54:07

Glantz: Yeah, that's right.

01-01:54:08

Burnett: And develop new approaches and—out of that collaboration?

01-01:54:14

Glantz: Right, and that's I think one of the things that the place was built on. People have done research on this kind of thing. I don't remember the person, I was talking to somebody at NIH, and they've actually quantitively shown that when you have groups like that of people with disparate backgrounds, they're more productive in terms of the volume of work done and it has a higher impact. And that's always been my—again I don't want to badmouth people who were doing narrow disciplinary work, kind of digging the hole deeper because I think that's important too. But I've always found that the area in between the disciplines is where the—you could—there's tremendous opportunity to bring new thinking to that.

01-01:55:08

And going on when we set up the [UCSF/UC Berkeley] bioengineering program, the idea that every student had to have two advisors from different disciplines [and campuses] that when we created the postdoc program in the tobacco center, which is modeled on the bioengineering program, but having to have two advisors from different disciplines and forcing breadth. And when I wrote the requirements for the bioengineering program, well along with a couple other people, but it was like we made people not just study in one

narrow area. And it was in a way implementing what I had put together for myself at the University of Cincinnati, but it's just like we want you to have breadth. You need to have depth in something, but we want you to have breadth too because over the long run, it's that stuff that seemed to kind of off to the side in the beginning [of your career] that opens up a lot of other doors. And I still think that's true, and I think if you look at me if you—

01-01:56:17

I remember a conversation with my father when I was an undergraduate, and he said, "Oh, I've heard about those bioengineering stuff, why don't you do that?" And I remember saying, "Oh, that sounds so stupid, why would I want to do that?" and I ended up setting up a whole program in it. And you have to be willing to evolve as new information and new opportunities come to bear.

01-01:56:47

Another thing that we put on a lot of emphasis on in the tobacco center is forcing people to learn how to talk to each other in different disciplines. And this is continuing, and Pam Ling who took over as director after I retired ended up one of the leading people in this and making it even better than when I had started. When we were recruiting fellows—well, I'm not doing it anymore, I'm retired but—and they're continuing this, they always look for people of mixed disciplines and then they all have to sit in the same room and talk to each other and forcing the molecular biologist to talk about things in in ways that a lawyer can understand and vice versa.

01-01:57:44

I still go to the research and progress seminars most months, and a common thing I say is, "Okay, now translate that so that the social scientist can understand it" or to the social scientist, "Translate that so that the molecular biologist can understand it." And I think that's tremendously important, and you end up with some of this strangest collaborations that come up with ideas that neither of them would've ever thought of. I think that's very important, and it does fly in the face of the strong disciplinary orientation that most academic institutions have and that most funding agencies frankly have.

Well now, it's called the National Academy of Medicine. I got elected to the Institute of Medicine, so I get to nominate other people. I haven't ever succeeded in getting anybody elected; I haven't succeeded in getting them past the first screen. And I remember they had a meeting to talk about this issue, which I went to, and it's like, well, the problem I have is that I'm talking—I'm putting people up who are straddling fields, and the selection process, it reflects a sort of traditional academic range. So, none of these people are like the leading person in both fields. Their contributions are bringing things—bringing neuroscience and behavior and addiction medicine together say. But are they like the world's best neuroscientist? No. So it continues to be a challenge, but I think that it we've certainly been successful. I mean all the people we trained whether I was in bioengineering or in the tobacco thing,

they've all gotten decent jobs, and the breadth that they have has always been viewed as a strength. So, things are slowly changing.

01-02:00:03
Burnett: Wonderful. This is maybe a good time to pause. And we'll take up—

01-02:00:07
Glantz: That's fine.

01-02:00:08
Burnett: —next time talking about the heart.

01-02:00:11
Glantz: Okay. Can I look at that? Because I think there was one thing I forgot to talk about just the first day notes. Let me just see. I think we got—there was one other—no, I can't remember what it was now. I'll think of it next time.

01-02:00:37
Burnett: We can absolutely come back to it, that's for sure.

01-02:00:40
Glantz: Yeah, there was one other important thing from either undergraduate or graduate school, but I can't remember what it was. Okay.

01-02:00:50
Burnett: Perfect, well, thank you for—

01-02:00:51
Glantz: I hope you had a good time.

01-02:00:52
Burnett: I sure did, yeah, and we'll continue next time.

Interview 2: June 14, 2021

02-00:00:13
Burnett: This is Paul Burnett, interviewing Stanton Glantz for the Science, Medicine, and Technology Series, and this is our second session, and it's June 14, 2021, and we're here in San Francisco. Welcome back. I wanted to ask a little bit more about the establishment of your scholarly career and your academic position at UCSF. Last we left off, you were in this fellowship limbo, I think, between '74 and '77. Can you talk about what happens in '77 for you with respect to the institution?

02-00:01:04
Glantz: Well, that's when I joined the faculty, as an assistant professor in residence, and basically continuing my research on cardiovascular function. And I had moved, actually, during my fellowship. The first fellowship I did at Stanford I had moved from studying isolated muscle to studying whole hearts, and, in particular, how they filled [, what is known as diastole]. And then I moved up to UCSF and ended up continuing that work, although Bill Parmley, who was the Chief of Cardiology and my mentor there, while he was a very famous cardiologist, internationally famous cardiologist, he actually had done his undergraduate work in physics. So, he was very interested and sympathetic to trying to bring physical and engineering concepts to bear on understanding the heart. And Parmley had also done a lot of the really important experimental work on cardiac muscle function that I based theoretical models in my thesis on. So, there was a kind of natural connection there.

02-00:02:24
Burnett: So, you started working in the mid-seventies with him?

02-00:02:30
Glantz: Yeah.

02-00:02:30
Burnett: So, it's a long partnership.

02-00:02:32
Glantz: Yeah, and I think I got my PhD in '73, and I became a Senior Fellow at UCSF in '75. And I think I talked about last time that was a period during which the economy was pretty terrible, and I had been hoping to get a faculty position, but the best that I could do was just to continue as a senior fellow. And at the time I was very unhappy to not have gotten a faculty position. I actually had been offered one [a faculty position] at another institution, and it was a perfectly nice job, but the mix of what they were looking for didn't fit with where I wanted to take my career; it was more directed at instrumentation, and I was more interested in applying engineering concepts to physiology. And I remember talking to Hal Sandler, who then was the head of biomedical research at NASA Ames. And I remember him saying to me, "Being stuck as a Fellow for two more years at UCSF was the best thing that had ever happened, or could have happened." And I remember—I think I said at the

time—that I said, "Yeah, that and bubonic plague." [laughter] But he was right, because that extra two-year period really gave me an opportunity to kind of get my scientific career moving, and begin to really establish a scientific identity, which is very, very important for your long-term success as a scientist.

02-00:04:13

Burnett: Absolutely. Can you talk a little bit about the state of the art, with respect to understanding how the heart functioned? You said you brought engineering concepts. Was it more of a natural-historical, physiological concept of the heart, and you're updating that with new techniques?

02-00:04:36

Glantz: Yeah, well, it wasn't so much techniques as approaches, and ways of thinking about the problem. I mean, one of the jokes is people that became physiologists or went to medical school because they didn't like math, and I like math, and so if you looked at the way people were thinking about the cardiac function, even though the main thing the heart does is pump, and it's a pressure vessel, things that engineers know about, the thinking was not very quantitative, and it was kind of naive from an engineering point of view. And by coming in and bringing kind of modern—they weren't even that modern—nineteenth-century ideas about mechanics, maybe even earlier than that, to understand the heart as a pump and the heart as a pressure vessel, it was kind of like a balloon. When you blow up a balloon, you put pressure into it, and that puts stress in the walls, and the balloon stops getting bigger when they equilibrate. Well, the heart is kind of like a balloon that's active, and so there the wall generates stress and compresses, and then gets smaller.

02-00:05:54

And so from a very kind of broad approach, I'd studied pressure vessels, and people I went to graduate school, wrote their dissertation on models, and the relationship between pressure and the stresses on the wall of a pressure vessel, it turns out the heart's pretty complicated, much more so than I and a lot of other people thought going in, because, first of all, it's thick. Most of the theories that people used to design, the big pressure vessels you see in chemical refining plants, or rockets, or things like that, are thin, meaning that the thickness of the wall is small compared to the diameter of the vessel, whereas in the heart, the heart might be a centimeter thick, and maybe three centimeters across, so it's "thick" [from a mathematical point of view], and as it contracts it gets relatively thicker. And also most materials, at least metals and things, over the range that you're looking at, have linear stress-strain curves; that is, as you pull on them, the resisting force increases proportionally. And when you're talking about the heart it's very highly nonlinear, which makes [modeling] it much, much harder. And the last thing is that the heart pushes back. The muscle actively contracts. And so a lot of the things that when I first got involved in this as a graduate student, and then continuing on as a fellow, and then as a professor, those are actually very,

very difficult problems, and, in fact, some of them still haven't been solved all these years later.

02-00:07:49

But, having said that, what I found is that there were things you could do, and taking approaches that, from an engineering point of view, were pretty simple-minded, when you brought them into the physiological context were viewed as very innovative and things you could get into the top journals, and sometimes after a fight, but—so there was a tremendous opportunity there to bring ideas across disciplines together, and come up with new insights that people hadn't gotten before, because they weren't used to thinking about things the way a mechanical engineer or somebody who knew about structural engineering would think of.

02-00:08:43

Burnett: So Bill Parmley was an early ally in that—

02-00:08:46

Glantz: Yes, absolutely, yeah.

02-00:08:47

Burnett: —with this background in physics. When you mentioned getting things into journals with a fight, was the fight internal in the—? Are you working for the Cardiovascular Research Institute, or is that not until '77?

02-00:09:02

Glantz: Well, the Cardiovascular Research Institute is a cross-departmental thing, and I was appointed in cardiology, in the Department of Medicine, working with Bill, but at the same time I was a Fellow of the Cardiovascular Research Institute. The CVRI had a large training grant, a huge training grant, that spanned all across the whole institute, and for my first time at UCSF I was funded as a fellow through the CVRI, which is a kind of standard relationship. So, one of the things that makes UCSF kind of a unique place are these cross-departmental institutes that help promote interdisciplinary research, and the CVRI was actually the first of those; in fact, the first one anywhere in the whole UC system.

02-00:09:58

Burnett: I was going to ask, because when you look at the history of the UC system there is this interdisciplinary push that Atkinson really sponsors in the mid-nineties. This is twenty years later.

02-00:10:10

Glantz: Yeah. Oh, I think they formed the CVRI in the fifties.

02-00:10:14

Burnett: Yeah, 1958. And it was conceived from the beginning as an interdisciplinary institute.

02-00:10:24

Glantz: Right, which was a radical—I mean, that was long before my time, but, no, that was very radical thinking. And still, if you look at most universities, even more medical schools, they still are very disciplinary in their focus. And that idea of moving between disciplines, moving between departments, and promoting that kind of collaborative work is really why UCSF got to be such a hot place.

02-00:10:57

Burnett: Well, going back to my earlier half question, the fight around getting things into journals, was that within your community or with the journal editors?

02-00:11:10

Glantz: Well, more with the peer reviewers. And we were taking approaches that were not familiar to them often, and they felt like, well, this doesn't belong here; this isn't classical physiology in the way that we're used to thinking about it, and there are all these equations, and we don't understand that, and why don't you send it to another journal. Because what I was interested in doing was broadening out the way the field felt, or thought about problems, and that meant you had to get it in front of those people. And so many of the papers that I wrote, which today are looked back on as sort of important classics, a lot of those got rejected by the journals that eventually published them. And, in fact, skipping ahead, one of the things I teach my fellows, or taught my fellows, is how to fight with a journal. And—

02-00:12:18

Burnett: How do you fight with a journal?

02-00:12:19

Glantz: Well, first of all, you have to keep an open mind, because reviewers might be right, and you have to deal with the problems that they identify. And sometimes, when they identify a problem, it's an issue you hadn't really thought about, and you need to go deal with it. Sometimes they didn't understand what you were trying to say, which means you didn't say it very well, not that the reviewer was stupid. And sometimes the reviewers are stupid, [laughter] and you have to come back and just defend what you said, and just engage the substance of the reviews and make the case for your work. And I've been quite successful at that. Now, years later, I was an associate editor of the *Journal of the American College of Cardiology* [for ten years] when Parmley was the Editor-in-Chief, and in our experience about a third of the papers we rejected—or, pardon me, no: we occasionally did get appeals of rejections, and about a third of those papers ended up getting published. So, my willingness to fight with journals was not unique, but most people, if they get a rejection, they just go somewhere else.

02-00:13:46

Now, the other thing, though, is even if you go somewhere else—there are some journals that I've learned that you just can't fight with them. They make up their mind and that's it, and if you go argue with them it's like you're just

wasting everybody's time. And there are others where you think, well, maybe that wasn't the most appropriate place to send this paper. But always, every paper that's rejected, the first thing we do is we act as if we're resubmitting it to that journal [by carefully engaging the reviewers' criticisms and revising the paper as appropriate]. And I personally, working with the fellow go through into a detailed point-by-point response, even if we're not resubmitting it to the same journal, and then use that to revise the paper before we go to the next journal. Because even a rejection is helpful in making the paper better [even if you are going to go to another journal].

02-00:14:41
Burnett: It's an external audience. I think when you're dealing with your own thoughts and your own local community of thinkers, there's a piece missing, or there's a distortion that's not obvious to you. It's almost like a—

02-00:14:55
Glantz: Yes.

02-00:14:56
Burnett: That is an editorial function that can serve you really well. But the idea of doing the review critique anyway as a tool, regardless of whether or not you resubmit, is really helpful, I think.

02-00:15:14
Glantz: Yes, because there's a range of—right now I'm an academic editor for a journal, *PLOS One*, and so I'm back to looking at it from the editor's side. There's a range of quality of the reviews that you get back, and sometimes the reviews are cursory or dumb, but most people try to be diligent about it. And so if somebody's taken the time to read the paper and offer criticisms of it, I think you kind of owe it to them at least to read their critique with an open mind. And you're getting independent feedback, which is very valuable in making the paper better. And I think if I look back over my entire career, I don't know the number but a lot of papers, especially the important papers, were published by journals that first rejected them. And in my whole career I can only think of two papers that we submitted that we didn't end up publishing in a decent journal somewhere, and one of them I actually ended up deciding the reviewers were right, and there were such fundamental flaws in the paper we shouldn't pursue it, and I figured they actually did me a favor. And another one, it was one of these ones where they came back and said, "Well, there's nothing wrong with this paper but it's really not that new." And usually when people came back with that we had an answer, but in thinking about it I thought, you know, they're right, and we just dropped it. [laughter] But other than that, we eventually got everything we tried to get published, published.

02-00:17:11
Burnett: I think this will come up in the course of your career, but it's something that you seem to value is some of the mechanics of scientific work, the social

mechanics of scientific work, the externalization of certain editorial review processes, are really valuable to you. It cuts through a lot of the normal human problems and frailties that we have, [laughs] that—

02-00:17:43
Glantz: Well, peer review, it's certainly not a perfect process, and I've seen some real junk get through the peer-review process, but I think it's good to get some independent assessment of things that you're proposing, and I think it's incumbent upon you as an author or a proposer in a grant to put your ideas forward in terms that the reader can understand, and that there is a certain amount of salesmanship associated with that, and trying to put yourself in the reader's shoes. And I think one of the big problems, mistakes a lot of people make is that they don't really think about the reader when they're writing. They don't think about the audience. And a couple of things I got to be quite well known with students and fellows for was saying, "You need to think about who's listening, and talk to them." Because it's very easy to get so focused on the minutia of what you're doing. And you need to pay attention to detail when you're doing research—there's no question about that—but when you're presenting something you need to get out of that, and you need to make the big points clear. And I think the two things I got to be quite well known for was, one, teaching people how to fight with journals, because most people, if they got rejected, they just went on [to another journal], and the other was in writing a paper to really think about the communication aspects of what you're writing. And that may have come out of the fact that I was often trying to bring new ideas from outside the discipline into some other audience, and that you needed to figure out how do you present this in a way that they'll understand. And the burden's really on you as the author to do that.

02-00:19:54
Burnett: It also sounds like that's a great tool, even within a specialist discipline.

02-00:19:59
Glantz: Oh, yeah.

02-00:19:59
Burnett: So even if it's a specialized journal or the journal of record in your particular narrow research field, if you want to have a broader impact, or if you imagine that there will be uptake possibly in the future from this research, outside of this narrow specialty, it behooves you to really try to make it as—"accessible" is the wrong word—clear and—

02-00:20:23
Glantz: No, "accessible" is the right word. You want it to be accessible. And I've never read a paper which I thought wasn't complicated enough. [laughter] You know? You really need to ask the question: what do you want the reader to take away from this paper. One thing I always do, which in some quarters is viewed as controversial—when I took freshman English, I learned that you should end the first paragraph of a composition with a thesis statement. That

is, boil the whole composition down to one sentence. What do you want people to take away from this? And so, when I'm writing scientific papers we always put a thesis statement in there. Well, that isn't how most scientific papers are written. It's like at the end of the introduction it says, "We're going to study X," which contains no useful information, because the paper is about X. You don't need to say, "I'm going to study X." So I like to say, "Here's what we learned about X, and why it's important," all boiled down to one sentence. And that's a hard sentence to write, actually, but I've found that—and this is what I tell fellows—the exercise of writing a thesis statement forces you to really ask the question: what is important about this paper? And then that gives the reader a guide to help as they're going through all the details in the paper, to kind of keep things in context. And there are a few times that editors have said, "This is not the way you write a paper," and may just take it out, but if you think about how do most people read papers, they look at the beginning and then they jump to the end and read the conclusion, and contextualize everything in the middle. So, it's like, let's put that at the beginning. And, in a way, this is more interdisciplinary thinking. It's bringing sort of basic English composition into scientific writing.

02-00:22:28

Burnett: It is something that seems to be very counterintuitive, I think, especially in the humanities. If we're used to thinking about the novel, or something like that, or a mystery, where you bury what the thing is actually about way near the end. But, if there's one thing you can take away from a freshman English class, it's the importance of the thesis statement. So it's wonderful that you've made that kind of part of your pedagogy in writing science papers and teaching how to do science writing. So you began—

02-00:23:05

Glantz: It's also like what they teach you in journalism, too, is that you don't want to, they call, "bury the lead." And I'm still working with a couple of fellows, even though I'm retired, and one of them is doing this—she's got a paper where there's a million details, and they're all interesting, but it's been a kind of slog. I keep saying to her, "What do you want people to take away from this? If someone was standing on one foot and said, 'Why do I care? Why should I bother reading your paper?', what's the answer, in a sentence?" And we're getting there. I mean, another bit of advice I was given once by a friend who's a science journalist, who's quite a good journalist, he said, "You know how I write? I always think of my grandmother, who's very smart but doesn't know anything about what I'm talking about, and so how do I explain something to my grandmother?" And I tell that to students and fellows: write for your grandmother. She's a smart person but doesn't know what you're doing, talking about it, and how do you communicate that to her? And I have never, well, personally as a reader, and also as a writer, have anybody ever say, "Gee, I wish this was more complicated and opaque." [laughter] And you really need to ask the question: what did you learn in doing this? And who cares? And that's what you want to organize the writing around.

02-00:24:52

And getting back to what we were talking about earlier, if you're trying to bring mathematics and biomechanics into physiology, and you're talking to an audience who became a physiologist because they didn't like math, how do you get them to be willing to accept that, and accept the thinking that's tied into that? Especially if it leads you to some kind of counterintuitive conclusion.

02-00:25:21

Burnett: And you said that these have become somewhat part of the canon in cardiology research. Did this lead to a thread of exploration and viewing the heart as a biomechanical system?

02-00:25:37

Glantz: Oh, yeah. Oh, yeah. The research I did in that area went on from when I started at UC as a fellow in the seventies up until the mid-to-late-nineties when tobacco kind of became my dominant research area. Another idea that was very radical at the time: the heart has four chambers: two ventricles, which are the main pumping chambers, and then there's two atria. The blood comes into the right atrium, goes to the right ventricle, which pumps it out to the lungs, then comes back through the left atrium, into the left ventricle, which pumps it out to the body. And if you look at a heart, most of the muscle mass is the left ventricle, because it's the high-pressure thing that pumps blood and spreads it out through your whole body. The right ventricle, it's got a much thinner wall. It's kind of wrapped around the side of the left ventricle. It operates at much lower pressures. And people hadn't really paid a lot of attention to the right ventricle. When I looked at her from a kind of mechanical point of view it's like, well, wait, but it's touching the left ventricle, but it's creating the external mechanical conditions around the left ventricle, because what's going on in the right ventricle is pressing on the left ventricle, and there's what I ended up calling ventricular interaction, and that was very controversial at the time. But now it's accepted that all four chambers of the heart, they're not just passive conduits, and they all touch and affect each other, and that is important in maintaining the normal cardiac function, and the balance between what's going out one side and to the other side.

02-00:27:43

And then the other idea that I had, early idea, was that the whole heart is in a bag called the pericardium, which is quite stiff, and the general thinking about the pericardium, at least a normal pericardium, was that it's just there to kind of hold the heart in place in your chest, and it doesn't really have much function. And what we were able to show is that the pericardium played a very important role in modulating this ventricular interaction. And that paper, we had a terrible time getting that accepted, and it was eventually published in *Circulation Research*, I think, which was one of the two most high-prestige, basic cardiovascular function journals, and it's viewed as a classic now. And it was because in bringing this sort of mechanical thinking to the heart—if you

go look at a physiology textbook, they have this sort of picture of the cardiovascular system, functionally, and it's like there's the right heart and then the lungs and then the left heart, and they're separate. And, in fact, they're touching each other, kind of a basic principle. If you know anything about mechanics, if things touch each other they affect each other. And so, I did a lot of work that kind of built out of that idea.

02-00:29:09

And the other thing was that if you look at the filling of the heart, pressures are quite low, the order of a few millimeters of mercury, whereas when it's pumping it's 100, 125 millimeters of mercury. And that filling was viewed as a kind of passive phase, but the way the heart fills essentially sets the initial conditions for the active ejection. And so, we did a lot of work around what determines that. How does the way that the heart relaxes from the previous beat affect how it fills? And those were all places where coming into it from a quantitative perspective just changed the way you thought about the problems.

02-00:30:01

Burnett: Right, right. And if I think about engineering and pressure vessels, one of the things that immediately comes to mind is fatigue, and when they fail, right? That's what engineers are interested in is what's the threshold at which this—how much steel do you need to keep this gas under pressure? And what are the weak points? What are the failure points? And so I can only imagine that the conceptualization of the heart in this way would really help to understand the effect of lesions, the effect of disease on the heart.

02-00:30:41

Glantz: Yeah, although it's a bit different there than when you're talking about, say, a steel pressure vessel failing, because what happens to the heart when something goes wrong, if you get a myocardial infarction, a heart attack, that tissue scars, so it actually becomes stiffer. And the problem there is that instead of a nice uniform shell—well, it's never quite uniform, but relatively uniform shell—you've got these stiff spots, and that distorts the way that it contracts. And when it fills, it distorts the way the muscle gets pulled when the heart's filling. And one of the things which is very important is that how much you stretch the muscle out before it contracts affects how hard it contracts, and so if you have an infarction and an area of stiffness, that's going to distort the way the muscle gets distended as the heart's filling, which then affects how it contracts. And this wasn't work I was doing, but it was developing around the time of what's now called wall motion abnormalities. And back then they just had angiography, which is when you look at a heart on X-ray. Now they have all these fancy new modern imaging techniques, which actually allow you to look much more closely—this was after I stopped doing this kind of work, but which allow you to much more actively understand and in more detail local deformations in the wall, which then affect how it functions when it's pumping.

02-00:32:41

So, our work laid a lot of that foundation, and at the same time we were able to identify sort of the big issues and the little issues, and when was local deformation important, and we showed that for a lot of important things it really wasn't, that you could really think of the heart as a ball with this thing hanging off on the side. And some of the early work we did was just modeling what determined the relationship between pressure and volume in this highly nonlinear system.

02-00:33:21

Burnett: Right, very far from the ideal gas laws. [laughter]

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Glantz: Yes, literally, very far.

02-00:33:27

Burnett: Less than ideal, yeah, absolutely. So, you brought an engineering way of thinking to cardiac physiology, and as an assistant—

02-00:33:44

Glantz: I wasn't the only person in the world doing this, but the number of other people kind of coming at this the way I was was probably under five people, [laughter] at the time, at the beginning.

02-00:33:58

Burnett: Right, right. But really a function of what was happening at UCSF, because it really parallels the story of Les [Leslie] Benet, who comes not from engineering but from chemical engineering, and brought the two-compartment models, that kind of thing, that more sophisticated way of really kind of the groundwork of modern pharmacokinetics, also at UCSF, in the School of Pharmacy, and, again, a handful of people—University of Michigan, Buffalo, a couple of other places—doing that kind of work, and then it takes off, which kind of points to what you're saying about an interdisciplinary culture across the university that apparently continues to this day. But you brought that to the research, but you also become an assistant professor with teaching responsibilities. And as a fellow I imagine you had some teaching responsibilities?

02-00:35:01

Glantz: No, I didn't have any formal teaching responsibilities, but I like to teach, and I did a little bit as a fellow. The other thing was I got to be quite well known as a statistician as my career developed, and I published this book, *Primer of Biostatistics*, which has gone through, I think, seven editions, and been published in about ten languages. And it's a little old now but it had gotten quite famous, and was a major player in the market. And I remember being introduced at national meetings, to getting some kind of award for the tobacco work I did. And they said, "Well, Dr. Glantz is well known for—we're having him here talking about tobacco, but I learned statistics from his *Primer of*

Biostatistics book." And that book really took a radically different approach to teaching statistics.

02-00:36:05

Well, before I talk about that, how did I get into all the statistics? Well, back then there was no statistics department at UCSF. There was some epidemiology, but not anything near what we have today, and there was no biostatistics department, so there was no organized teaching of biostatistics. And, in fact, one of the contributions I made was I organized the teaching of biostatistics a bit later. But what would happen is people knew I knew math. This actually started when I was a postdoc at Stanford. People knew I knew math, and since people went to medical school because they didn't like math, they figured, well, if you know math you're a statistician. And I had taken one really crappy course in statistics as an undergraduate, and nothing in graduate school. But people kept coming to me, and it was interesting questions, and I wanted to be helpful, so I taught myself statistics in order to help these other people.

02-00:37:19

Well, the way *Primer of Biostatistics* got going is I was asked to help with teaching this stuff for the medical students, and so it was a very last-minute thing. I can't remember the details, but I think whoever had been doing it wasn't available or something, and I had a very short period of time to get ready. And so I wrote, essentially, what became the book in about a month or six weeks, trying to get ready to do this course. And if you get back to what I was talking about, about the audience, if you go back and look at most statistics textbooks then, and even still now, most of them are written from the point of view of how do you develop the underlying theory. And if you're doing that, there's a certain logical order that you need to go through to build the building blocks and start putting them together. And the problem is that's completely disconnected from what people [biomedical researchers] care about when they're using this stuff in the real world. And so the *Primer of Biostatistics* is actually, compared to most textbooks, organized backwards. And it really starts out with what are the questions people are asking, and what's the right way to approach those, and it never actually explicitly develops the theory. It's there, it's embedded, and I teach it to people without admitting I'm teaching it to them, but the book is very oriented in a very, very practical way, and I've described it to people is it's like the first English-language statistics book, [laughter] and really tried to minimize the math, and teach it through pictures and concepts. And that's why it's been just so successful, is that it's really talking to people where they are.

02-00:39:35

And I had a good time doing that, but what happened was so I had this beginning of a book, and then I wanted to—I'd already done one book on mathematical modeling and biology, which UC Press published, but I wanted to get a commercial publisher. And I remember an American Heart meeting, going down the publisher's row at the meeting, saying, "I have this idea from a

statistic textbook," and no, no, no, no. And McGraw Hill said, "Oh, we have this *Primer of* series, and we just published the *Primer of Epidemiology*, and this sounds pretty good, and we're interested." And they took my book proposal and sent it out to review, pretty standard thing, and the reviewers came back, and they said, "Oh, this guy's a good writer but we hate the organization. It's backwards. [laughter] And it's not like a traditional statistics textbook." And I said to the editor, "Yes, that's right. It's not a traditional statistics textbook. I did it backwards on purpose." And, "Oh, we don't know if we can sell it," and yap-da-da-da-da. And so, I actually negotiated a lower royalty rate so I could get the book written the way that I wanted. And it was very successful from the beginning.

02-00:41:04

And when they came back to me [after the first edition was successful] and said, "We want to do a second edition—" And the standard contract language was whatever you had for the first edition applied going forward, and I said to them—fortunately the same editor was still there—I said to him, "Look, you know that I agreed to a reduced royalty rate to get this going, and now you realize what a big success it is, and I want a better royalty rate." And after some arm twisting they said yes. But that's another example of kind of coming at these problems differently. And the book, as I said, it's been very, very successful.

02-00:41:50

And another kind of story: my wife and I go backpacking, and I remember one time we were sitting up in Yosemite National Park, in the middle of nowhere, sitting by a stream, drinking some water, and these two guys came down off a big dome or something with all their ropes, and all dirty, and they sit down. They're drinking water. This guy is looking at me kind of strange, and finally said, "Are you Stan—?" I didn't know the guy from Adam. He said, "Are you Stan Glantz." I said, "Yeah, why?" And he said, "Because you taught me statistics." [laughs] And the course I taught, which I taught for decades, had a reputation of being the best statistics course around. And, again, it was because it was understanding what do the audience care about, and then how do you give them what they need to do what they're doing right, and give them at least enough of the theoretical background that they kind of understand the broader concepts, aren't applying all of this stuff in just a completely rote manner, which leads to a lot of mistakes.

02-00:43:16

Burnett: Right, right. Well, and you mentioned in '79 there's this first publication, *Mathematics for Biomedical Applications*. Was that the first iteration of this, or was that a different project?

02-00:43:27

Glantz: No, that's a completely different project. That was like how do you do mathematical modeling in biological problems. There's a lot of pharmacokinetics in that book. There were things about the kind of diastolic

pressure-volume things I was doing, and how do you take—it was basically like a second course in applied math for an engineering student, but put in the context of using it for biomedical research.

02-00:44:02
Burnett: There's only one criticism in a review that I read: it was that it had an exclusive focus on differential equations. Is that—?

02-00:44:13
Glantz: Yeah, pretty—it wasn't exclusively differential equations, but, yeah, it was mostly differential equations, because that, if you understand—differential equations is how to model change, and it applies—if you go back, you talk about Les Bennett and pharmacokinetics; if you look at the differential equations that are there that you're applying to a multi-compartment system, it's no different than a spring damper system for the shock absorbers on your car. And it was basically a course in applied differential equations, applied to biomedical problems. But I got into other things that were related to that frequency analysis and more advanced topics. But, yeah.

02-00:45:10
Burnett: Well, you had said in our first session, I think, that that was a stumbling block for a lot of the biomedical folks, is that they didn't understand differential equations, and I think you said it was like magic to them or something. [laughs]

02-00:45:23
Glantz: Yeah, well, that's right. So, this was an idea to try to demystify that stuff, in the context of problems they cared about.

02-00:45:31
Burnett: Right, right, and that was the—

02-00:45:32
Glantz: It's like the biostatistics: if you step back and look at the mathematical content in the mathematics or biomedical applications in the two statistics texts I wrote, the substance is sort of generic, and I could go, when I was writing those books, into classic texts in other areas to look for how do people explain it or what kind of examples did they use, or, in some cases, to understand the methods myself when they were things I hadn't used that much personally. But it was then taking that stuff—I understood it, and taking that stuff, but then translating it into a context that the reader would care about. In fact, again, this one postdoc I'm working with now, I have a pretty sophisticated understanding of biostatistics and epidemiology—I've written a couple of books on the subject—but she was actually getting into some methods I wasn't familiar with; I mean, I knew they existed, but I had never actually used them. And I had a terrible time understanding what she was trying to say in some of these analyses. And I finally said to her, "Look, I am—" Because she was sort of saying, "This is all standard, blah, blah, blah." And she was right, but I said, "Look, compared to your typical person reading this paper I am a very

sophisticated reader, and if I don't understand it the reviewers aren't going to understand it, and you need to get this paper to the point where at least I know what you're talking about." And it took a lot of back and forth, but she did. And then I pushed her to go a little further. It's like, okay, now I understand it. Now you need to get somebody who doesn't know as much as I do to understand it, because that's who's going to be reviewing the paper. It's just very unlikely—there's a small chance you'd have gotten a reviewer who was familiar with this pretty advanced statistical approach, but it was unlikely, so you had to have enough—a paper is not a textbook. You don't write a paper to teach people every little thing, but sometimes you need enough teaching in the paper, especially if you're bringing new ideas to bear, that the reviewers and the readers understand what it is you're talking about.

02-00:48:17

Burnett: And there's also that review of the literature in a lot of papers. I don't know if this is relevant to your field, but in doing that review you signal to the reviewers your framing of the historiography of this research, the relevant research threads that contribute to the paper, and—

02-00:48:43

Glantz: Right, well, that's in any discipline you need to do that, because you need to contextualize what you're talking about, and you need to make it clear what the unanswered questions are that you're going to answer.

02-00:48:57

Burnett: Right, right. And just before we leave that specific area, you also wrote companion software to the *Primer of Biostatistics*, SigmaStat?

02-00:49:09

Glantz: Well, what happened there—well, actually, there was an intermediate. So what happened, I wrote the book, and the book—another thing that distinguished, and still distinguishes in many ways, *Primer of Biostatistics* is I don't talk about software at all in the book. A lot of statistics books are written around how do you do this with software, and I wanted people to understand the concepts that were embodied in the software. And one kind of apocryphal story I used to always tell the students was when my office was in the hospital this woman had a lab across the way, and she came barging into my office one day and said, "I just got this review back, and they said I did the statistics wrong." And they said, "By the way, we know Stan Glantz is at UCSF. Why don't you go talk to him?" And it turned out she's right across the hall. So she came in and said, "I need help on this." [laughter] And I said, "I'm happy to help you, but I'm busy right now some come back tomorrow." So she didn't come back. And I bumped into her a bit later, and I said, "Gee, I didn't mean to be rude. I just was busy, and I would have been happy to help you. What did you do?" And she said, "Oh, I just put it in the software and ran every test, and when something came up significant I reported that." And it's like, that's not how you're supposed to do this stuff, but the level of ignorance among reviewers was so high at that point that you often got away with it.

02-00:50:56

One of the things that both got me well known and got a lot of people mad at me was I ended up doing an analysis of the statistical analysis in several leading journals in cardiology, and I don't remember the numbers but something like eighty percent of them were wrong. And the mistakes people were making were very simpleminded mistakes, like using the wrong test. And, in fact, not to get too technical, people were doing t-tests when they should have been doing analysis of variance. And t-test compares two things, and ANOVA [analysis of variance] compares any number of things. And I figured what happened, in most statistics books they always do the t-test first, and so I figured you had somebody who didn't know what they were doing, they had to do something, they didn't like statistics, they read the book till they got the first thing that would get them the P value and then used that. [laughter] And so one reason I put the ANOVA first in *Primer of Biostatistics* is, okay, if people only read until they get to something and they use that—because you can always use an ANOVA where you could use a t-test; you just can't use t-tests for all ANOVA cases—and stopped, that didn't know what they were doing, they would at least do it right by accident. [laughter]

02-00:52:19

And so what ended up happening was I had—so I said, "I don't want to focus on the mechanics of doing this. I want people to understand the ideas." And, in fact, in teaching the course—and I would get trashed about this every time they did a teaching evaluation—I did not let the students use software. I didn't even want them to use—by then programmable calculators were coming out. I wanted to see them work out all the arithmetic on paper. And I told them, "I know this is tedious, but I want you to do it once so you know what's going on inside the software." And people hated it, but then two years later I'd bump into people who'd taken the course, said, "You know, now I actually know what I'm doing when I use these programs."

02-00:53:06

So what happened, because I had done a lot of computer programming at NASA and I thought it was fun, and a new—this was, again, back in the Pliocene age—Borland, which was a software company down in Santa Cruz, came up with something called Turbo Pascal, which was a programming language, with an integrated debugging environment right with the language, so you could, rather than writing something, punching it on cards, running it through a computer, coming back an hour later, finding your mistake, it did all of that in real time. And so this friend of mine said, "Gee, this is a cool program." So I got a copy of it and said, "What can I program to play with it?" And I thought, well, I'll write some statistical software. And I did it just for myself, and then people liked it. So, McGraw Hill actually started distributing it with the book in a later edition. And to this day people like it, because, again, it's very simple, and it just does kind of what the book does, without a lot of bells and whistles. So, if you look at it compared to a real statistical package, it's very limited in what it will do, but it will do what most people need most of the time really easily.

02-00:54:36

And, in developing that, I got some other ideas for how to do it better, but I didn't have the time to program it. Well, and this is a good example of kind of serendipity in science. So it happened that there were a couple of guys over at the Pacific Medical Center across town, which had a research institute connected with it, a couple of surgeons, who had also gotten into the ventricular interaction and cardiac mechanics, kind of the way I did: they had kind of an engineering approach. And I went over there one time [for a seminar they were presenting on their work], and we got to know each other, and were looking at that. And one of them had actually developed a scientific [computer] graphics package called SigmaPlot, which got to be very popular, because back then things like Excel wouldn't draw scientific graphs very well. They didn't put error bars on. And SigmaPlot, it's still to this day quite popular among scientists, and they said, "We want a statistics add-in for SigmaPlot." And I said, "Well, I have this idea for a program that will do error checking, logical error checking, as people are doing the research, or doing the statistics, to check that they're meeting the underlying assumptions [when applying a specific statistical test to a specific set of data]," and it had something that by today would be called artificial intelligence, very simpleminded, that would ask them some questions and tell them what [statistical method was appropriate to answer their question with the data they had], which none of the packages back then did.

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And I said, "I'm willing to work with you guys on this, but there are two conditions I have. One is I don't want to be a consultant; I want to have a royalty interest in it. And that's in your interest because you don't have to pay me anything upfront. And, two, I want control over how the package interacts with the user." And they said, "Okay," and we ended up developing what became SigmaStat, which was kind of an advanced version of my little *Primer of Biostatistics* program, except it was a full-powered statistical system that would do all the stuff Primer wouldn't do. But it did do things like check normality and equal variance assumptions, which are intrinsic to a lot of statistical tests, and if you violated them and said, "You know, you really shouldn't be using this test; here's the right way to do it." And that never became a super gigantic package, but it was quite successful, and in the end, while it took a few years, I ended up making quite a lot of money off of it, too.

02-00:57:32

Burnett: Great. [laughter]

02-00:57:32

Glantz: So, it was great. But, again, it was the same idea of I knew how I wanted to approach it, and I had a different idea, and was willing to take the risk of deferred income, as it were. And if the thing had bombed I wouldn't have gotten anything. But it led to a long collaboration with those guys. And the program has now been absorbed [into SigmaPlot and other software].

SigmaPlot's still around, and they just absorbed it into that. And along the way I finally got bought out for an insane amount of money.

02-00:58:07
Burnett: Nice. [laughter]

02-00:58:08
Glantz: Yeah.

02-00:58:09
Burnett: Well, what were the names, again, of those two physicians? Do you—?

02-00:58:12
Glantz: One was John Osborne, who was the surgeon, and the other was Dick Mitchell. Mitchell was the engineer and Osborne was the surgeon. They were studying the right ventricle, and the mechanics of the right ventricle, which was very closely related to what I was doing, and trying to be very quantitative about it. So, we were like fellow travelers on that.

02-00:58:42
Burnett: Right, right. Something you said about the person who asked you for help when she said, "I ran it until I got something that worked," made me think of something that economists and other scientists who work with statistics have said over and over, not just with statistics: that there are consequences to the increase in computing power.

02-00:59:09
Glantz: Yeah.

02-00:59:09
Burnett: Do you have a word on that?

02-00:59:11
Glantz: No, I agree with them. There's a lot of people who are just out there doing stuff. You take a modern statistics package. It's like giving somebody a really powerful tool, and a giant hammer, and letting them have at it. It's better than it used to be, but people still do a lot of stupid things in these programs, and that's why even to the very end, in teaching Introductory Biostatistics, which I originated that course long before we had a Biostatistics Department at UCSF, we never used software, and the students always whined about it. But I said to them, "This is a very powerful tool, and you can blow your head off by accident without knowing what you're doing."

02-01:00:10
Burnett: That's a good analogy. That's a really good analogy.

02-01:00:12
Glantz: Yeah, it's like giving some—there's a huge amount of statistical firepower in these new packages, and some of them actually copied or maybe independently came up with the advice module that we had in SigmaStat, that

would ask people a few questions, and say, "Why don't you do this?" But none of these programs, even when they're there, require you to do it. And one of the things I would tell the students, and tell people generally, is when you're dealing with medicine or physiology, if you go in and really screw up badly, bad things happen—the patient might die, or get very sick—not every time you make a mistake, but it's often obvious when you screw up. Well, if you're doing statistics, there's a few exceptions to this, but most of the time if you put the numbers in and use the wrong test, the program will still run. It will still generate output. It doesn't say to you, "Are you really sure you wanted to do this?" Which, again, was the thing that was very innovative about SigmaStat when we first put it out. It's like, well, you ran an analysis of variance, which makes these assumptions about the underlying populations, and the data you gave me makes it look like you're violating them. But most programs just say, oh, here's the numbers. [laughs] No, I think that's a totally accurate criticism.

02-01:01:56

Burnett: You say it's gotten better. Are people adjusting for that problem?

02-01:02:05

Glantz: Well, I don't know, but the thing that happened is I mentioned that I wrote this one paper, and I may have done a follow-up on it, really looking at what was wrong with the way statistics was being done in a couple of top-line cardiology journals, I remember the first paper like that I wrote was published by *Circulation Research*, which is one of the leading basic cardiovascular journals, and they published it with an editorial. [The paper was actually published in *Circulation*: Glantz SA. Biostatistics: how to detect, correct and prevent errors in the medical literature. *Circulation*. 1980 Jan;61(1):1-7. doi: 10.1161/01.cir.61.1.1. PMID: 7349923.] What had happened was a paper got published in cardiovascular mechanics that was published in *Circ. Research*, which, again, it's a very prestigious journal, and the experiment itself was a tour de force, that they managed to do these studies with these dogs who were instrumented to measure heart function, and they weren't like—we did it in a lab. These were dogs that they sewed up, they recover, and they monitor them running around in a field. So it was an amazing experiment. And they got to the end and they did the statistics wrong, and they did it wrong in a way where what they actually found was not obvious. Sometimes the results are so strong that if you do it wrong and the analysis doesn't matter, the effect is still big.

02-01:03:27

But I got irritated, and I remember writing a letter to the journal, saying, "Hey, you guys think you're such hotshots, and you published this paper with this very elementary mistake." That's the other thing: most of the errors in the literature were not some exotic method, because usually if people knew enough to even know about the exotic methods, they knew what they were talking about. It was the simple stuff people were screwing up. And they wrote back and said, "Well, gee." They could have ignored me, they could have just blown it off, but they wrote back and said, "Gee, if you're right we have a problem. Could you do an analysis?" So, I actually ended up looking at

a couple volumes of the journal, and wrote them back, and that got turned into a paper, which they published with an editorial saying, "This is a problem. We're going to improve the quality of our statistical review." And Bill Parmley happened to see it before I did, and he walked into my office, and he said, "I can tell you two things, Stan. One, you should be very proud of yourself; and two is you've really pissed a lot of people off." [laughs]

02-01:04:36

Burnett: What was the name of that paper, roughly?

02-01:04:38

Glantz: If you look in the CV, it's something—"Errors in Statistical Literature." It should be easy enough to—if you can't find it, let me know and I'll find it. [The paper is: Glantz S. "Biostatistics: How to detect, correct, and prevent errors in the medical literature." *Circulation* 1980; 61: 1–7.]

02-01:04:50

Glantz: And so what happened, there were several other people around that time who did similar analyses of their disciplines, kind of independently, and so most good journals now have recognized that the normal peer review system isn't very good at catching statistical errors, because the substance-oriented reviewers often don't know anything about statistics. And so many, many journals actually have a statistical editor, that if a paper, they're close to being accepted, they have somebody look at the statistics. And I can't remember if I did or somebody else went back and showed that that actually worked. It wasn't that everything came out perfect, but that the number of errors, especially simpleminded errors, really dropped substantially. So that was kind of an institutional change that I can't say was all due to me, but I contributed to, that I think has really improved the quality of the literature.

02-01:06:01

Burnett: Well, speaking of institutional changes, you're still an assistant professor in 1979, and you join a committee to establish a program, a new program, and it's a multi-institutional program. Can you talk about that, how that came about?

02-01:06:22

Glantz: Well, so what happened was the guy who was then the Dean of the School of Medicine was a guy named Julius Krevans, who had come from Johns Hopkins, and Hopkins is one of the places that had an early and very high-quality program in biomedical engineering. And the guy who ran that was a friend of Krevans. They were both residents together at Hopkins, and Krevans ended up going more into administration, and I think he was the associate dean or something of the medical school before UCSF hired him. But one of the things that he wanted to do was start a bioengineering program at UCSF, and, in fact, part of his recruitment deal, he told me later, was that the university would support the creation of such a program, which, of course, didn't happen, and one of the problems: UCSF doesn't have an engineering

school. And there just weren't enough people around with the right competences to do that. And also the early seventies were a very tough financial time, including for the university, because there was originally going to be a fifth school at UCSF that would include things like that, and it never came to be. And I had gotten to know some of the faculty at Berkeley, because back then the computational facilities at UCSF were just beyond horrible. I remember you used to have to go down to the basement, and one of the machines that was used for administrative computing, you could at night run some scientific stuff on them, and it was not very good, and it was very slow. And so I used to go over to Berkeley when I needed to actually do computing, and I don't know how I did it but I got an account over there.

02-01:08:44

And so Krevans said to me, "I know this is something you care about. I want to set a committee up to try to get something going with Berkeley, because we haven't been able to do it here," and would I do that. And I said, "Yeah, I think that would be a lot of fun, and a good idea," and it would institutionalize a lot of the ideas I was pushing. So, they set up a committee, and, as I recall, there were two faculty at Berkeley, Ted Lewis in Electrical Engineering and Stanley Berger in Mechanical Engineering—Lewis did kind of engineering approaches to neuroscience, and Berger had done really interesting fluid mechanics research on how heart valves work, and me, as a pipsqueak assistant professor, and a guy named Shelly Baumrind, who was a dentist, a senior member of the UCSF faculty, to try to get a program going.

02-01:09:45

And there were lots of problems then. We didn't have BART. Getting back and forth was a big pain in the ass for students. In fact, one of the things I did later was I managed to get a shuttle bus running between Berkeley and UCSF so the students could get back and forth, which went on for years until BART started running, and then we—

02-01:10:12

Burnett: BART wasn't running?

02-01:10:13

Glantz: No, that was long before BART. And there, Ted and Stan [Berger] had the kind of same ideas that I had about interdisciplinarity, but from the other side. And they realized that Berkeley was never going to have a medical school. In fact, years and years and years ago what became UCSF was part of Berkeley administratively, and then it broke off, I think, under Reagan, as a way of sticking it to the Berkeley radicals. [laughter] At least, that's the urban myth. And UCSF was never going to have an engineering school with the kind of depth that you needed. And so that created a kind of community of interests that transcended all the other problems: of the fact that they're far away; that UCSF was on quarters, and by then Berkeley had gone to semesters, which created gigantic problems for the students; and there was also a lot of distrust back and forth. A lot of the Berkeley faculty at UCSF was a bunch of rich

doctors, and kind of a black hole that would exploit their poor students, and the UCSF people looked at Berkeley as a bunch of academic elitists who were looking down their nose at everybody. And there were elements of truth to both of those things, but we really were looking to try to develop a student-centered program.

02-01:12:00

And one of the ideas I remember Ted saying, which has been a kind of animating idea in my work, is that the best interdisciplinary research occurs between one pair of ears. And so we came up with this idea of students having to have two advisors from different disciplines, different campuses. We wrote the requirements, the academic requirements, very broadly, and very directed at both interdisciplinarity, and very tailored to the individual student. Because one of the things that was really frustrating Stan and Ted was that students could do bioengineering in the EE [Electrical Engineering] Department and in the ME [Mechanical Engineering] Department, but the dissertation requirements before you took your qualifying exam forced them to take a lot of totally irrelevant courses. And they were fine for EE or ME, but—and what that did is it crowded out some of the physiology and biology and other courses that the students really needed to become rounded out, so you ended up with students who were either inadequately prepared in terms of coursework to really do the best work, or weren't prepared at all, or ended up having to take a gigantic number of extra courses, which wasn't fair to the students.

02-01:13:32

And so we ended up writing up this thing. One of the things that had held up a lot of previous efforts was kind of theoretical problems, because the academic environment's a very conservative environment, and it requires everything to go through seven hundred committees, and some people were threatened. So it's like, well, what about this? What about that? And all these theoretical problems. And so what we did was we did what we called an existence proof. We got a couple of students who were interested in working with people at UCSF, and we just did it, without having any kind of formal program. So they were officially still Berkeley students, but they were working with people at UCSF, jointly supervised by people at Berkeley, and they had very good experiences. And so when the time came to actually put the program through, and get it formally approved, and the naysayers emerged, we could say, well, those are theoretical problems, but, here, talk to Mark; talk to Steve; [laughter] they'll tell you about how this all worked out great for them. And that became the foundation for a program now. I think the last time I looked they had like fifty graduate students, fifty or sixty graduate students, and it was just going great guns.

02-01:15:07

And one of the things, or a couple of the things, that still to this day distinguish it are that it's interdisciplinary, from the ground up, that breadth is very important as well as depth; and that we don't have tracts, that within

some very broad requirements that are designed to keep people from just flaking out, every student works with the faculty to develop an individualized program. And when I went on later and became the chair of the program, even before that, people would get into our place and get into Hopkins, because we were getting top-tier students, and they'd say, "Well, which one should I go to?" And it's like, okay, what are you looking for? If you want a program where it's very well-defined, where you go in there, you know exactly what you're required to do, and you kind of get on the conveyor belt and come out the other end with a degree in a very highly structured environment, go to Hopkins, but if you want a lot of freedom you're going to be really frustrated. If you want a place where you have a lot of freedom, but you have a lot of responsibility to kind of help work with the faculty to come up with an individualized program, and you're willing to do that, you like that, then come here. Because if you're coming here looking for highly-structured—it wasn't an unstructured environment, but—a super highly-structured environment, you're going to be very frustrated.

02-01:16:57

And we had students who went to Hopkins. And, in fact, I had a woman working for me as an administrator years later who later went off and got her PhD in epidemiology [at Hopkins]. And the same is true for the—by then, Berkeley had an epi program that wasn't as open as the bioengineering, but kind of close. And I remember she was trying to decide which one to go to, because she got into both. And I gave her the same speech, and she ended up going to Hopkins and did quite well. But I remember her calling me up and saying, "Boy, I feel like I'm in an academic straightjacket here." And it's like, well, yeah. [laughter] That's what you signed up for. She got a good training and got a good job and all that, but—

02-01:17:50

Burnett: Well, I had a couple questions about the program. One is about considerations of chemical engineering at Berkeley, because it seemed like it might be a bit more of a natural fit, because of fluid mechanics and all of that kind of stuff. Was that ever considered? It's a different college, so it's the College of Chemistry, not Engineering.

02-01:18:14

Glantz: Right, right, right. Well, what we ended up doing was we created something called a graduate group, which is a UC bureaucratic thing, which functions like a department in terms of recruiting and supervising students and granting degrees, but it's an interdepartmental thing. We opened the program to any interested faculty on both campuses, and got a pretty broad range of participation at UCSF. How the thing was promoted and advertised among faculty at Berkeley, I didn't really have much to do with that. So it was a long time ago, but I sort of vaguely remember some discussion of the College of Chemistry, but I just can't remember.

02-01:19:19

Burnett: I remember that there's at least one faculty member in Chem E who, in the early 1980s, really got into the bio field. And that may just have been the writing on the wall. Because the other question that I have is about genetic engineering, right, when that door opens—legally, at least—in 1980, and you get some of the first greatest hits of [laughter] genetic engineering is monoclonal antibodies and those kinds of things, that is right around that time. Was that in the air, or was it more about the fluid mechanics of the heart and that kind of thing?

02-01:20:03

Glantz: Yeah, I think if you looked at people who—when you're talking about any of these programs, they're all manifestations of the faculty who are involved, and that stuff wasn't very visible at the time. It was more kind of classical engineering approaches applied in biomedical problems. But nobody was against that, and if you look at the current bioengineering program, that stuff is in there pretty strongly. Yeah.

02-01:20:33

Burnett: But that took a while to sort of filter.

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Glantz: Yeah, but during the time I was active in the leadership, it wasn't that we were hostile to it, but I don't recall anybody with that focus saying, "Hi, I want to be part of this."

02-01:20:49

Burnett: Right. So, getting the existence proof, that was in that '79 to '83 period, when the committee was going, and you needed proof of concept, and you got a couple of intrepid students to participate.

02-01:21:03

Glantz: Yeah, schlep back and forth.

02-01:21:06

Burnett: Right. [laughs] And then in '84 you become chairman of this graduate group that you just mentioned, and that you run into the late eighties. And you retain your involvement; in the nineties you're a chief graduate advisor.

02-01:21:23

Glantz: Yeah, what happened there was—if you go back, just one little nuance about the early leadership. So, I was the one who did most of the scutwork to get the program going, because I was the assistant professor. But in the end, when the time came to actually get the program formally approved, which meant going through the Berkeley bureaucracy, the UCSF bureaucracy, the two [academic] senates, and then up through systemwide, and all the way to the California post-secondary commission, when it finally got approved, I was the logical person to run it because I had done most of the on-the-ground dirty work. But various people said that that wouldn't fly with the Berkeley faculty, because I was, A, viewed as kind of an upstart, a helpful upstart but an upstart, and also

just an assistant professor. So I think it was Stan Berger that ended up the chair, and they made me the vice chair, because under the bylaws the chair and the vice chair would [be from different campuses and] rotate.

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And I was a little bit irritated about that, but I got convinced that that was a worthwhile sacrifice to make to get the thing up and running. But the problem it created for me was I was still kind of expected to do a lot of the day-to-day management. And that actually created a lot of tension between me and Berger, because on one hand he was the chair, not me, but there were a lot of things he wasn't doing, because I had been doing them before [and everyone looked to me to keep doing them even though I was not chair]. And finally, when things kind of settled down, they made me the chair. And I did that for several years. And then when I went off on—well, first of all, again, under the bylaws the chair would rotate, because we really tried to structure it to put both campuses on an equal footing. And then I went off on a sabbatical to Vermont and wrote another statistics textbook on multivariate modeling [*Primer of Applied Analysis of Variance,* McGraw-Hill].

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But what happened, as I said, the requirements for the program were written broadly, and there was a lot of responsibility put on the students and the faculty to come up with and enforce rational academic programs. And when I came back, students started coming to me, as the former chair, and complaining that they just weren't getting the guidance that they needed. And a lot of the kind of important bureaucratic details that you need to be functioning to have a program like this work, people were asleep at the switch. So, I started complaining to the Executive Committee on their behalf. And one of the rules of life is if you complain about something enough they put you in charge. [laughter] So they said, "Look, you're not happy with the advising the students you're getting; you become the graduate advisor." And there were several students who really got into quite deep academic trouble, because people weren't paying attention, and "You go clean up the mess," which I did.

02-01:24:56

And there were three or four students, and a couple of them I said, "You need to get your ass in gear and get out of here, finish up." There was one where the problem was the faculty member was playing the infinitely receding goalpost game, where the student kept meeting the requirements, and then he kept saying, "Well, I want you to do more and more and more and more." And the student had gotten very discouraged, and went out and just got a job as a waitress or something, and just blew [her dissertation]—very smart person—just blew it off. And I ended up having a serious talk with the faculty member, saying, "Look, if you go back and look at her original plan that everybody approved—" And there are certain aspects of this which are very bureaucratic, but useful, like having a plan that got approved by a committee. And if everything goes fine, who cares? But when you run into a problem, it gives

you a reference point. And I said to this guy, "Look, if you don't sign her thesis I will remove you, which I could do as an agent of the dean, and I'll sign it." So he worked with her and got the thesis out, and she went off and had a nice career.

02-01:26:20

And then there was another person who was working with a faculty member who just kept not letting her publish stuff. And it turned out he and his wife had set up a front company that looked like UC, and was basically stealing intellectual property from the students in university. He was a very powerful full professor, vice chair of a department. And he ended up getting fired over it eventually, because he was basically defrauding the students in the university. So that got kind of exciting. [laughter] But yeah, that's why. And then when everything got sort of cleaned up, and it was time, somebody else took over as a graduate advisor.

02-01:27:12

Burnett: All this, when you were laying the groundwork for this program, you had come up for tenure. So you were writing statistics textbooks, and you were establishing a program, an academic program, multi-institutional academic program, and you come up for tenure, you're granted tenure in '81, so that's two years into this process. And so the question is: how was that?

02-01:27:43

Glantz: Well, there are a couple of different aspects to that. The first thing is the original appointment that I had at UCSF was an in-residence appointment, which is an academic senate appointment, but you're not on a tenure track; it's a soft money appointment. And, in fact, a creation of the in-residence series was something that was done way back when they created the Cardiovascular Research Institute, because an FTE, a tenured slot, the university basically hands those out in proportion to enrollment. And UCSF didn't have any undergraduates, so there are relatively few FTEs at UCSF. And when Julius Comroe created the CVRI, he said, "You could be either a tenure track faculty member or a clinical faculty member," which had no security in employment; you weren't in the Academic Senate; no status. And he said, "You want me to bring in world-class scientists here, and you're giving them second-class appointments." And so they invented the in-residence series as a way to say, okay, we're not paying you a state money, and you don't get official tenure, but you can get kind of de facto tenure, and you have the same status.

02-01:29:05

And so what happened was when the time came to—oh, and one other thing, just as an important aside in this, by the time I got to UCSF as a Fellow, Comroe had retired, but he was still kind of hanging around a little bit, and he taught a course on how to survive as a junior faculty member, which I took, which was probably the most valuable ten hours I spent from a point of view of career development in my whole career. In fact, later I started teaching a course kind of modeled on Comroe's course. And one of the things he said,

"What you need to understand, all these different appointments—there's ladder rank; there's in residence; there's adjunct; there's clinical—and they're different, and the requirements for them are different, and the conditions for appointment and promotion are different, and the authority that you have is different. And go read the Academic Procedures Manual, because it's really important to understand these things."

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And so what happened was when they said, "We want you to join the faculty," they offered me an adjunct position. And the department chairs always minimize these differences, and the pay is the same, it's not that different, you're still a professor. And I remember saying to Holly Smith, who was the Chairman of Medicine then, "I know the difference. You're not in the Academic Senate if you're an adjunct faculty member." And he said, "Well, who cares? Nobody ever goes to academic senate meetings. It's totally boring. Blah, blah, blah." And I said, "No, you can't supervise students if you're not in the Senate without special dispensation. You can't teach without special dispensation. And those are things I want to do, and I want to be a full member of the faculty. I'm not going to press you for a tenured slot, because I know there aren't very many of them here, but I at least want that." And I remember him saying, "Well, hmm, that's a much more serious commitment on our part. Let me think about it and talk to Bill Parmley." And later they said, "Okay, we'll give you an in-residence appointment."

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And when I went on years later and started teaching a Comroe-style course on how to make a career, I tell this story because if I hadn't insisted on that I wouldn't have been able to do the teaching, or it would have been much harder. I wouldn't have been able to have my own students, or it would have been much harder. But, most important, I wouldn't have been on that committee that set up the bioengineering program. And what happened, by then the University had a rule saying that if you were going to start a new academic program you had to have at least one tenured faculty behind it. And the reason for that is there were a lot of programs in the Public Health School at Berkeley that were being run by soft money in-residence faculty. During the war in Vietnam, to get money Nixon cut a lot of the funding for those things, and as it trickled down to Berkeley there were several faculty who were essentially laid off or encouraged to leave, and these programs fell apart with a bunch of students whose parents got mad and complained to the legislature. And so the University changed the rules to say you had to have at least one permanent university-funded person behind any new program.

02-01:33:01

So when I went back to Julie Krevans after we'd done all the politicking, had gotten the program written up, had gotten everybody to buy off on it, and he said, "This is great; we'll submit it"—I remember it was a Tuesday—I said to Julie, "Well, where's my FTE? Because if we submit this without it, it's not going to get approved. So if you want it to happen, we need the FTE." And I

said, "Frankly, I don't see how you're going to do that, because that was the seventies. The budget was a catastrophe. They've been cutting faculty at UCSF and everywhere else." And he said, "Come back on Thursday." And I came back, and he had the FTE. And I remember saying, "Where in God's name did you get this?" And he said, "You're too young to ask such questions." [laughter] But later I found out there was a piece of an FTE leftover from the old Fifth School that never happened, and he put the arm on the Department of Medicine to come up with the rest.

02-01:34:06

And so that's how I got my FTE and got tenure. And so when I tell the students, when I'm saying to them, "These things are important; the exact nature of the appointment that you get is important," if I hadn't known enough from that course Comroe taught to even ask the question, not only would there not probably have been a bioengineering set up, but I probably would not have ever gotten to a tenured position at UCSF. And these are things you need to pay attention to. And, in fact, I can tell you that there were many fellows that I had who ended up with much better faculty appointments at lots of other institutions, and at UCSF, too, because they knew to ask the question. And, in fact, I remember one fellow who's now a full professor at Davis, with tenure, in the Medical School, which there aren't that many tenure track slots, and also another one who's at Merced, when they were in these negotiations, and they said, "Well, I want at least an in-residence appointment; I'd like an FTE; that would be even better," they were told, "How did you know these were different?" It's like, "I read the Academic Procedures Manual." And they said, "How did you find out about the Academic Procedures Manual?" [laughter] So these kind of details are very, very important, in terms of people moving forward in their careers.

02-01:35:56

Burnett: And that transformation of the academy away from these formal tenure track positions, and this proliferation of academic specialists, and those kinds of positions, reflect the budgetary problems, but they also limit—exactly what you said—what you can do as an academic. It's kind of this para-academic university environment.

02-01:36:27

Glantz: Right, and a young person just getting into this—as I said, if I hadn't taken this course with Comroe I would've never known to ask the question. And the system really takes advantage of these people. And years later, I ended up on a committee. I'd been agitating around this. Well, or what happened—this is many years later, when Larry Pitts was the—and I can't remember if he was the chair of the UCSF Academic Senate Division or the systemwide; I think it was at UCSF—he was starting to agitate about trying to get the adjunct and clinical faculty treated better. And I ended up getting involved in that, and then started asking the question, "Well, if you look at the APM, why are a lot these people not at least in residence? Because if you look at what they're actually doing, as opposed to the convenience of the departments' economics,

they're doing things that warrant Senate membership, after being on a bunch of committees and this dragging on for a while." We ended up getting about four or five hundred who had been at non-Senate series moved into Senate series, just in the interest of fairness, and changing the kind of appointment process, with some not quite as successfully, but to force the question to be like, when you're appointing somebody you need to look at what their actual responsibilities are, not how cheaply you can get them in the door if you're the department.

02-01:38:18

Burnett: And when was that period where you moved them into the FTE track, roughly?

02-01:38:25

Glantz: You know, I don't remember, but I could go try to find the—

02-01:38:31

Burnett: But ballpark, like in the eighties, or—?

02-01:38:33

Glantz: Oh, it was later than that. If you look through my CV, you'll see some committees I was on about appropriateness of appointments or something. [There were two committees: Task Force on Clinician Scientists at UCSF (1999–2001) and Task Force on Faculty Recruitment and Retention (2002–2004).] If you can't find it, I'll go dig around and see if I can find the reports we wrote. But I think that it's all very important, in terms of the kind of integrity of the system, in addition to being fair to people, and not seeing—and I watched what had happened to other people at UCSF, and at other institutions, who weren't as savvy about this as, fortunately, I was, thanks to Comroe, and who ended up just getting very, very frustrated and very exploited. I mean, back when I was at Stanford as a graduate student, leading the SWOPSI course that we talked about last time, we found all these women who were essentially running labs, writing grants, but who were not given faculty appointments, and who were being totally screwed and exploited. And I just thought that was wrong. And this was the kind of UC version of the same kind of exploitation that was going on.

02-01:39:55

Now, there were people who were legitimately in these appointments, when you looked at what they were actually doing. I remember one fellow that had worked with me, who ended up getting offered a job over at San Francisco General, and who really didn't want to teach. And they'd offered her an adjunct appointment. And she came to me, and she said, "I know you believe—am I getting screwed and all that?" And it's like, "Look, you don't want to teach, and if you're going to be a Senate faculty member, you've got to do research, teaching, university, and public service. And if you really don't want to teach, and you just want to run this lab, then an adjunct appointment is appropriate."

02-01:40:42

So, about half the time—and we went through and did this review, looking at people's actual work responsibilities. About half of them were okay, but the other half weren't. And I remember the administration came back and said, "Well, but we need to look at their publications." So we went and looked at a sample of their publications, and showed that the people who were adjunct and clinical, and who should have been at least in residence, if you looked at their publications compared to a sample of ladder rank and in-residence faculty of the same faculty, they weren't that different. It went on for several years, but in the end I think we made a big difference.

02-01:41:32

Burnett: Well, it's another strain in your career. I was going to point out just a couple of pieces from the seventies, while we're in that period. One is to the Hastings Law Journal, of all places, and it's a letter, and a response to—

02-01:41:51

Glantz: Well, no, it was a whole article.

02-01:41:53

Burnett: Yeah. But there was an exchange, let's say, in response to Professor Craver. [Glantz S. A reply to Professor Craver: Physicians in private practice already have enough power. *Hastings Law J.* 27: 315 - 332, 1975.] Can you tell us a little bit about that?

02-01:42:01

Glantz: I don't remember the details, but this guy had written an article, something about health policy, that I thought was just crazy. The way that happened, it happened that a couple of the people who were in leadership positions at Hastings, law students who were good friends of mine, knew—we were talking about this paper, because they knew I was at UCSF when I was ranting and raving, and they said, "Well, why don't you write something?" So that's how that happened.

02-01:42:34

Burnett: Okay. [laughter] Well, it sounded like he felt that there should be more professional autonomy, because as doctors were doing more work for Medicare and Medicaid they were coming under these institutionalized peer review panels, and he felt like this was an encroachment, an unjust encroachment on the authority and independence of physicians.

02-01:42:57

Glantz: Oh, we were saying that you needed quality control, probably, yeah.

02-01:43:00

Burnett: Yeah, yeah. And you actually went through this list of how privileged physicians are, and how they've organized their labor back to the American Medical Association.

02-01:43:12
Glantz: Yeah. Oh, yeah.

02-01:43:14
Burnett: The point of bringing that up is that there is, I think, a pattern in your research that is not purely scientific. You are interested in power. You're interested in fairness, and the abuse of power bothers you. If you feel that someone is using their privilege for the wrong reasons, or to excess, that's a problem. If people are using their economic power in a way that ends up hurting people, it bothers you.

02-01:43:45
Glantz: Yeah, that's true.

02-01:43:47
Burnett: So, there's one other piece from the following year, 1976, "Election Outcomes: Whose Money Matters?" [Glantz S, Abramowitz A, Burkart M. Election outcomes: Whose money matters? *J. Politics* 38: 1033 -1038, 1976] And I won't ask you to recite what it's about, but basically you did an analysis of campaign expenditures, and found that it's the challenger's funding that drives the economics of the election cycle.

02-01:44:18
Glantz: Right. Yeah, well, that's actually an interesting paper because the way that came to pass was I had gotten involved, as a volunteer, in an initiative on election funding that passed, and is what led to the creation of the [California] Fair Political Practices Commission. And I just got involved in it because it seemed like a good thing to do. And another graduate student, a political science graduate student, named Alan Abramowitz—I met Alan through that—and Common Cause, which was sponsoring the initiative, had collected all this data on campaign finance, which was extremely difficult back then because we didn't have the same—the whole point of this initiative was to make that more transparent. And they were just floundering around in it, and Alan and I decided to analyze it.

02-01:45:18
And that was actually where my first interaction with multivariate statistical methods. I actually learned quite a lot. And we said, "Gee, we have this; we ought to publish it." And so we wrote that paper. That was a paper we had to fight a lot to get in, because the conventional wisdom was that whichever side spent the most money won. And what we showed is that what the incumbent spent wasn't the predictive variable; it was if the challenger spent enough. That was the important predictor. And so, actually, now that's pretty widely accepted, but that was another radical thing forward. In fact, Alan went on and became a very famous political scientist, studying election financing at Emory. I think he's retired from there now. But that was another great example of cross-disciplinary work, and how being involved in some kind of political thing helps identify interesting academic questions that are worthy of research, and have implications when you—it would have been implications

no matter which way the results had come out. And that's what first got me interested in multivariate statistics, which then I got very well-known and wrote a pretty successful textbook about.

02-01:46:55
Burnett: And it had policy implications—

02-01:46:56
Glantz: Oh, yeah.

02-01:46:56
Burnett: —because your conclusions are that we need to be careful about campaign finance restrictions, because that can end up favoring the incumbent, and you should look into providing additional funding for challengers, if you're serious about it.

02-01:47:16
Glantz: Right. Yeah, we were advocating public financing back then, which was pretty new. And the other practical implication later, when I got involved in all these electoral battles against the tobacco industry, people would say, "Oh my God, they're going to spend gazillions of dollars, and we can never match that." And I was like, "No, you don't have to match it; you just have to have enough." And so it's a much more manageable thing, that you really need enough to make sure you get your message out there, and that's much more important than being able to match them dollar for dollar. In fact, there's a kind of diminishing return on money spent on elections after a certain point.

02-01:48:02
Burnett: So in these two papers, there's kind of two very important driving factors: there's a moral sense, right, that something's wrong, and something needs to be done about it; and then the other is that science plays an important role in any kind of advocacy or policy orientation, or even any moral action, because you need to know that what you believe is right is going to be serviced by the right strategy or the right method.

02-01:48:41
Glantz: Yeah, and when you do this stuff you need to be openminded, too. If the science comes out backwards from what you expect, which has happened to me a few times, then you need to follow it, and be willing to change your mind.

02-01:49:05
Burnett: Thank you very much for spending time with us this, now, afternoon.

02-01:49:09
Glantz: Okay.

02-01:49:09
Burnett: And we'll continue next week.

Interview 3: June 29, 2021

03-00:00:19

Burnett: This is Paul Burnett, interviewing Dr. Stan Glantz for the UCSF Project, and this is our third session, and this is June 29, 2021, and we're here in San Francisco. And last we left off, we were talking about some of your research interests that were a bit related but somewhat orthogonal to cardiovascular research, for example this paper on election outcomes. And we were talking about a kind of moral and political animus that seems to be at work with you. So I'm wondering if you could talk a little bit more, A, about that, and about other kinds of political and social problems that you were beginning to encounter and wrestle with in the 1970s.

03-00:01:25

Glantz: Right. Well, if you go back to the time, that was a period of a lot of ferment, because of the Vietnam War and the emergence of the environmental movement and political reform movement growing out of Watergate. And we talked about the work that I did in the SWOPSI course, looking at military funding of research. And I also got involved in several political initiative campaigns, because I liked to deal with issues sort of more than the personalities that are associated with candidate politics. And it was volunteering for an initiative which led to the creation of the Fair Political Practices Commission, for example, which I got involved in the research that led to the "Whose Money Matters" paper [Glantz S, Abramowitz A, Burkart M. "Election outcomes: Whose money matters?" *J. Politics* 1976; 38: 1033–1038], and we actually did [but did not publish] a second paper on how campaign financing affected outcomes in elections [without an incumbent]. And that was really my introduction to multivariate analysis. So there was this constant kind of back and forth play between academic research interests and practical policy.

03-00:02:57

Another thing that was very important: when you did the SWOPSI courses, one of the questions that they asked you when you would apply to do it, it was, "If you do this research and it comes out the way you think it will, what difference will it make?" And what are the kind of key unanswered questions that might impact a policy decision? And learning to ask that question is something I still suggest to students and fellows working with me. And that doesn't mean that every bit of research you do has to have some practical outcome, but if you are interested in looking at policy-relevant work, it's important to think about what are the important unanswered questions. But in approaching them you've still got to keep an open mind and be willing to find an answer that is not what you expected, which has happened to me multiple times. So you have to be willing to follow the evidence where it takes you.

03-00:04:09

But I was involved in several environmental campaigns, and mostly just as a volunteer. I didn't have any leadership role in any of these. I think the Fair Political Practices Act campaign that was sponsored by Common Cause,

which led to those two political science papers, where we were actually doing research that helped inform the campaign—although they didn't ask us to do that; it's just I got to know Alan Abramowitz and we thought, well, here we have this data; we should crunch it. But in the others, I was just doing kind of routine volunteering.

03-00:04:53

And if you skip forward in time to when I got involved in a formal way in the tobacco issue, which was 1978, which was Proposition 5, an effort to pass smoking and non-smoking areas, something that by today's standards was ridiculously weak but at the time was viewed as radical. I got into that, with the same idea of, well, I have some background that would be relevant. It was something I thought was important. I never liked being around secondhand smoke. I have asthma, and I probably got it from breathing my parents' secondhand smoke. And so when I showed up at the campaign as a volunteer, there were really no scientists willing to do dirty work. There were some famous scientists and physicians who were putting their name on it, and offering their credibility, but in terms of rolling up their sleeves and actually doing work on the campaign, the kind of scutwork of a campaign, there weren't any. And when Peter Hanauer and Paul Loveday, who were two lawyers who were running the whole thing, realized that I was a person doing life sciences research with an engineering background and an economics minor, which is like the perfect background for working on the passive smoking issue, I got instantly sucked into the campaign leadership.

03-00:06:32

And one of the major roles I played was trying to take the emerging science and translate it into English to use in a campaign. And I remember Paul saying, "You're really articulate, and we want to use you as a spokesman, but you have to get a new suit." Because at that point the only suit I had was the orange suit I got married in that my wife made for me. [laughter] And so he actually took me out and I bought a blue tweed suit that met his television standards. But it was really an interesting process, because I'd never been involved at a high level in a campaign, and I was one of three or four or five people who were running it. And, in fact, Peter, Paul, and I wrote the ballot argument going in the voter pamphlet, because we didn't have enough money to hire a professional. And I didn't sign it—we got famous people to sign it—but it really was a tremendous education, and what could you say, and what could you not say.

03-00:07:53

And one of the things that I did as part of that campaign was put together what I think was the first bibliography of research on secondhand smoke, which really began my kind of intense engagement with the UCSF library, because one of the reference librarians helped me do it. And I recall at the time there were 135 papers on secondhand smoke in this bibliography, which was, compared to some things, a lot, but compared to the thousands and thousands of papers on active smoking, was a spit in the ocean. But we were going

forward, trying to make the argument that there was an emerging case that secondhand smoke was bad. And so I didn't really start doing active research on secondhand smoke until later, but that was this effort of taking science and trying to translate it into English. I actually wrote a little brochure for handing out to potential supporters and voters about what do we know about secondhand smoke. And at the time, back in '78, we didn't know a lot. We knew secondhand smoke had a lot of toxic chemicals in it, that it was richer, on a per gram basis, in toxins than mainstream smoke, because the cigarette was not burning as hot when it was generating sidestream smoke, and there were three or four papers showing it was bad for kids, and that was about it.

03-00:09:42

Burnett: You mentioned that you were one of the few scientists who were involved and capable of doing the kind of research that you were doing to support these efforts. I'm wondering if you took inspiration from some of the other types of science activism that were going on in the 1970s: this is probably quite far off, but the Science for the People organization that was challenging the claims of sociobiology, for example, that there is some kind of reading into the book of nature, that there are certain kinds of behaviors that are deeply genetic and that we've evolved to have. Were there organizations or models that influenced you to think that this is possible?

03-00:10:39

Glantz: Well, I mean, that was all going on. I forget his first name, but [William] Shockley, who was a physicist at Stanford who got really into the sort of genetics and behavior thing in ways that were, frankly, racist. I mean, that was a hot issue at Stanford when I was there. Again, I was interested in environmental issues, and the whole approach of looking at what does the science really say to inform environmental policymaking. I mean, I wasn't doing any of that but that was all going on around me. So I don't think I was consciously saying, "Oh, look at this; I could be part of this," but it was certainly in the air.

03-00:11:29 And one other thing that happened back in the early seventies, when I was still a postdoc at UCSF, working with Bill Parmley, is I was just really getting fed up with academia. The economy was very bad then. That's why I ended up having to do two postdocs is I just couldn't find a job I liked. [One university] had strong interest in me for a professorship back east in Pittsburgh, but the kind of work they were looking for was somebody who was more oriented around instrumentation and developing measurement techniques related to cardiology, whereas I was using those techniques, and I was sort of going in a more physiological direction. And one of the things that I had been involved in, which I think we talked about before, was the first SWOPSI course on science advising. Didn't we talk about that?

03-00:12:33

Burnett: Mm-hmm.

03-00:12:34

Glantz: And there were a couple of things that came out of that course, out of the report it created. One was it helped contribute to the development of the Office of Technology Assessment in Congress, which was providing Congress with independent scientific advice. And another thing was the American Association for the Advancement of Sciences Congressional Science Fellows Program, which still exists today. And, in fact, I had two postdocs working with me who were very oriented toward policy who ended up leaving their fellowships early to go become AAAS fellows, and it was hard to advise them not to do it, because the people who get into that program were pretty elite, and even back then, when it was only a few years old, it was clear that it was a great pathway into important policy jobs in science policy, in the government or in Congress. And I had always kind of had that in the back of my mind as an escape hatch if I decided I didn't like academia.

03-00:13:52

And so I decided to apply for it, and I just had had it with writing grants, and I didn't think I'd ever get [an academic] job, and nobody cared what I was doing. And I remember going in to Bill Parmley once and saying, "Nobody asks me for anything. Nobody calls me. I just sit in my office and do research all the time." And he said, "Enjoy it, because later you're going to have so many other demands on your time you're going to wish to have this back," and he was right. I mean, the closest thing to that was years later I took a sabbatical and wrote a textbook on statistics [*Primer of Applied Regression and Analysis of Variance*], and it was the same thing; it was like, oh, I get to think now. [laughter] But the way the process worked is you applied, and then the finalists, they sent you a list of science topics, policy-oriented science topics, that were [hot issues at the time]—

[break]

03-00:14:58

So they [the AAAS selection committee] sent you a list of policy-relevant science questions, and you had a couple of days to write a policy brief, which you submitted, and then they flew you back to DC. And your interview was a mock presentation of the policy brief to a Senator. And it shows you how things have changed, because at the time, in this long list of policy questions, there was only one health-related question. And back then at UCSF I don't think the library even got the *New York Times*, so it was a health sciences library, and so there was one thing I had a prayer of researching quickly, and it was a proposal by Senator Kennedy to tax the nicotine content of cigarettes as a way of discouraging smoking. And at the time the evidence was just beginning to gel about what's called smoker compensation, and that is that nicotine is an addictive drug people habituate to getting a certain level of nicotine in their blood, and if you reduce the nicotine in the cigarettes they were smoking, they would smoke more cigarettes, or smoke them more intensively. In fact, that was work that was being done over at San Francisco

General [Hospital], by a guy named Neal Benowitz, who I'd never met at the time.

03-00:16:35 And so I convinced myself that taxing the nicotine content of cigarettes was not a good idea because it would just lead to more smoking, so I wrote this passionate brief arguing that this was really a stupid idea, and that what people really ought to do—and it wasn't framed using this exact language because it hadn't gelled yet—was to reduce the social acceptability of smoking, by doing things like protecting nonsmokers from secondhand smoke, and things like that. So I sent the brief in, went back wearing my orange suit, because it was the only suit I had, and didn't get the fellowship. And I was very disappointed, because I was used to, if I tried really hard, being able to succeed. And I remember meeting with a friend of ours at the time who lived out here but did a lot of work with Congress as a consultant, and she said, "They did you a big favor in not giving you that fellowship, because first of all you don't go back and just say the Senator's wrong. That's just not the reality of the way things work back there. And, plus, you're wearing an orange suit." And the other thing she said is, "Look, the kind of people who do well in those jobs—" And I've gotten to know a lot of people who are policy advisors to high-level politicians, and what they do is very important and potentially very influential, but they're all quiet people, and they're all people who—I mean, the way I describe it is when you see the hearing and the Senator is asking questions, they're the people sitting behind them, handing them notes. They're people who are invisible to the public. And I'm just not that kind of person. And I think, in hindsight, if I had gotten the fellowship I would have been miserable, and I would have learned that this was a big mistake. And so I put [the policy brief] aside and went back to studying diastole and how hearts filled and stuff like that.

03-00:19:08 Well, several years later, when Proposition 5 came along, and I showed up to volunteer at some campaign event, I brought that policy brief, and I gave it to Peter and Paul, and said, "By the way, I've thought about these issues." And they said, "Oh my God. These are deep thoughts." And it was that failure, I think, to get the fellowship [that laid the foundation for my subsequent tobacco work]—and, in hindsight, they made the right decision. My friend was right when she said, "It's good they didn't give you this job." That really helped me get launched into thinking about policy issues around secondhand smoke.

03-00:19:53 And the other thing that was very radical about the campaign, in the Proposition 5 campaign, and the way people were thinking about it, was it was really not about smokers. It was about nonsmokers, and it was really looking at cigarette smoke as air pollution. And that whole idea of indoor air pollution was just developing. And we had, in that campaign, stronger support from environmental groups, like the Sierra Club, than we did from a lot of the health groups, and they're still defining the smoking issue as a medical problem. And basically you had these people who were smokers, and you

needed to figure out a way to get them to quit smoking, and the social and political dimensions of the problem were just not the way the mainstream organizations were thinking about the issue.

03-00:20:54 And, in fact, there was a view that this whole passive smoking issue was kind of a sideshow. There wasn't that much science yet, although compared to a lot of things which are regulated as environmental toxins there was a lot, actually. But compared to the super gigantic literature on smoking, active smoking, it was not much. And then you had the tobacco companies, and their various front groups and agents, jumping up and down criticizing the science, as it was, and you had these risk-averse health organizations just saying, "We don't want to get in the middle of all of that." So the failed AAAS fellowship actually, I think, played a very important role in sort of setting up things that happened many years later, and really kind of helped create that sort of intellectual thrust that grew into a whole gigantic research program ten, fifteen years later.

03-00:22:15
Burnett: Right, right. So it was clear to you then that there was a political shaping going on, and disciplinary, right? So biomedicine looks at what happens to the body once it's sick.

03-00:22:36
Glantz: Right.

03-00:22:36
Burnett: Right? And preventive medicine is a very small part of the larger—

03-00:22:43
Glantz: Right.

03-00:22:43
Burnett: —scope of biomedicine, and public health is—I think it was described in your book, *Tobacco War*, that it was reduced to your family physician saying, "Don't smoke," if you're a smoker.

03-00:23:03
Glantz: Right.

03-00:23:03
Burnett: "It's my duty to advise you," et cetera, et cetera. But comparing that—well, for those who have not grown up in that environment, can you give us a 360 of 1974, what it's like in the workplace, at home, at the bar? Describe that environment for me.

03-00:23:34
Glantz: Well, smoking, it wasn't in my home, [laughs] at least right here, this home. I think in the forty-some years, almost fifty years that we've been in this house, I think one cigarette has been smoked in here by some moving guy, until we said, "Don't smoke in this house." But smoking, there was a strong social

norm supporting it [in the society in general]. I think the best story about that was my wife's aunt and uncle, they were very into hosting, and they would have this giant Hanukkah party every winter where they invited all these friends and relatives to their house. They didn't smoke, and, in fact, my wife's uncle had had a lung removed years earlier for some reason, which I don't remember what it was, if I ever knew, but they would put out ashtrays. And you go into the house during this party and you needed a chainsaw to get through the air, there was so much smoke. And we said to them, "Why do you do this? You don't smoke. You don't like it. It's probably bad for Ralph." And it's like, "Well, we don't want to be rude. It would be rude not to put out ashtrays for people." And so, at the time, when we were saying people shouldn't have to breathe this stuff, that was a really radical idea, because it was just viewed as you're telling people not to breathe; you're infringing on people's rights; everybody does this. And it was really baked into the culture. And the NIH [National Institutes of Health], for example, funded very little research on smoking, and partially it was because it was not viewed as a medical problem, and partially because they knew that if they did, they could get in trouble with some powerful people in Congress who were defending the tobacco industry.

03-00:25:57 And what was going on, and the way the medical and health system was thinking about smoking, again, was if somebody smoked and got sick, you took care of that, and then there was efforts to get people not to smoke, and maybe to keep kids from starting, but it was all viewed very, very narrowly. There was no political environment around it. The idea of this being a normative behavior, and you could break that norm, just people didn't even think about it. You could smoke on airplanes. I mean, I remember one time I was on a flight going back to Boston for something or another, and there had just been a new report put out from the Institute of Medicine called *The Airliner Cabin Air Environment*, which somebody pushed them to do. And I had been reading this, and it was talking about pollution levels inside an airplane, because you're in a tube being shot across the country with all these people packed in it, and they put me in the smoking section because I got there kind of late. And at that point there was a rule that you couldn't force anybody to the smoking section. And I remember handing that report to the flight attendant and saying, "You've got to—" When I got on the plane they put me in the back, and it was because the front part was all filled up. And they said, "Well, don't worry, nobody will smoke back there," and then the plane takes off, and they turn off the no smoking sign, and the guy next to me lights up. And I said to the flight attendant, "Hey, I was told nobody would smoke around me." And it's like, "Here, read this," [laughs] you know. [And they made the people around me on the flight stop smoking.]

03-00:27:50 But it was just everywhere, and to ask somebody—you could smoke in restaurants. UCSF was the last major academic medical center in the state to stop selling cigarettes. Why? Because the medical school dean was a smoker and the hospital director was a smoker. And when some of us on the faculty

said, "Hey, we're a medical center; we shouldn't be selling cigarettes," they had all these cockamamie reasons about, "Oh, well, there'll be smuggling, and it'll hurt the gift shop." It was all this kind of tobacco industry's arguments writ small. And you skip forward today, and when you talk to students and to young people, and not so young people now, and you tell them about the world that existed back then, they look at you as if you're—you could smoke on airplanes? They just can't believe it.

03-00:28:51 But one of the things that, going back to the Proposition 5 campaign in 1978, a lot of the people working on it were very influenced by the environmental movement and really thinking about this as air pollution, and people shouldn't have to breathe air pollution, and we're just talking about indoor air. There were some people in the [American] Cancer Society who got very engaged. The [American] Lung Association got very engaged. The [American] Heart Association had to be dragged kicking and screaming in, and never really did that much on the campaign back then, even though we know today that the major health effects of secondhand smoke are heart disease, not cancer—I mean, it causes cancer, too, but at much lower levels than the cardiovascular effects. But having been involved in the campaign, we started out three-to-one ahead. There was some polling. And I remember being at a meeting, and everybody was all excited and said, "Oh, well, we're going to win, hooray." And Paul Loveday, who was the chair of the campaign, a lawyer, he said, "They haven't started yet, and the tobacco industry [is very rich and powerful]—" Back then the political season started on Labor Day, and that's when the advertising usually started, and the tobacco companies started running saturation advertising in early August, which was unheard of at the time. And they spent a fortune—it was $6.5 million, which back then was a huge amount of money to spend on even a state campaign—and just advertised us into the ground.

03-00:30:56 And the thing that I learned from being involved in this campaign on a day to day basis was to really respect the power of these guys, their complete unethical behavior. And you really, by the end of that, just learned that this is not a scientific question. This is about politics. This is about social norms, and controlling the social environment. And all of those ideas today are very well accepted in public health, and there's a developing literature around commercial determinants of health, and if you look at other industries—on global warming, on junk food, on environmental issues—the political and social dimensions of these issues, those are broadly accepted, but back then to say really the problem here is not individuals being rude, smokers being rude; the problem here is not people making bad decisions; the problem is you have these giant multinational corporations who are making a ton of money by promoting a social and policy environment that supports their products and their profits, and they're going to fight to protect that. That's something I learned very, very early on. And that view, when we would try to make those arguments, a lot of the health establishment were viewed as bizarre.

03-00:32:45
Burnett: The notion that an industry can be a public health vector, it can be—

03-00:32:51
Glantz: Right.

03-00:32:51
Burnett: —like water for mosquitoes, or—

03-00:32:52
Glantz: Right. In fact, that was one of my contributions was to come up with that framing, that if you want to control malaria you have to understand mosquitoes.

03-00:33:02
Burnett: Right, and water, yeah. [laughs]

03-00:33:04
Glantz: Yeah, when I've started saying that, that was viewed as radical, just strange, and now it's well accepted. I mean, I remember being in a meeting where the Director General of the WHO—Margaret Chan, I think was her name—she was giving some speech at some big international meeting, and said, "You have to understand the tobacco industry, just like you have to understand mosquitos to control malaria." But those were all very, very strange ideas back in the seventies and the eighties, and even into the nineties, but now that framing has become well established. And I think that the experience I had in the trenches, working on Proposition 5 in 1978 and Proposition 10 in 1980, which was the second try to get the smoking restrictions passed, really cemented my appreciation of what bad guys these [tobacco executives] are.

03-00:34:17 And then the other thing that we learned in the Prop 5 campaign, it started out that we had very little money, but what little we had it started out talking about secondhand smoke is bad and protect your health and all of that, and the industry was hammering us with freedom and bogus claims that restricting smoking would destroy the economy, and cost government a lot of money. And finally, in the end, out of just frustration we managed to make an ad attacking the tobacco industry as the problem, and what it was, if you know the old train sets, they would have these little plastic billboards you'd put on your train layout, and we took one of those and we put a "No on 5" ad on one side and then flipped it around and the other side was a thousand dollar bill with a tobacco leaf in it. And we said, these are the guys that are really talking here. And we actually started recovering in the polls after we started going after the industry, and just saying to the public, "You're getting fooled here." We didn't recover enough to win, but that was the beginning—

03-00:35:48 And then there were some other people. There was a guy named Alan Blum, who was a physician in Florida at the time, who was saying the idea of counter-advertising, which, again, was radical, and going after the tobacco

industry, and kind of discrediting their marketing messages. And so, again, these are well-established ideas today, but back then it was very controversial.

03-00:36:24

Burnett: And I watched, I think, through the resources you made available to me—there was a pair of ads. I think this is later, in '83, for San Francisco Proposition P. And there was an ad from the tobacco industry, or supported by the tobacco industry, that showed the average American, like a waitress in a diner, and a cowboy on a ranch, saying, "Big government is here to restrict my freedoms. I don't like anybody telling me what to do." And the response ad was a cowboy in San Francisco [laughter] saying, "We're simple folk here in San Francisco, and we like to do things the way we do, and we don't want some rich folk from some other big industry spending a lot of money to fool people into doing something that hurts us," or something like that.

03-00:37:25

Glantz: Right, right. Yeah, that ad actually won the advertising equivalent of an Oscar, and, yeah, it was a cowboy on a horse riding up a hill in San Francisco by the Painted Ladies—it's a standard kind of tourist photo—saying, "We don't like big tobacco companies coming into town and telling us what to do, and vote yes on P," which was a referendum that the tobacco companies forced on a San Francisco ordinance limiting smoking. And it was actually the first time the tobacco companies ever lost an election, and that was in 1983.

03-00:38:11 So the story leading up to that was after we ran Prop 5 in 1978, we tried again in 1980 with Proposition 10, and lost again. And, in fact, there's one sort of story in between, and that is I was actually the person who gave the concession speech when we lost Proposition 5. And the reason I did it was I was actually a newbie in the issue. The rest of the leadership had been working on this issue for several years by the time I got involved, and they were just too depressed to concede, so they sent me out there. And what I said was the tobacco companies just spend us into the ground, but one thing you learn when you're running a political campaign is very few people actually change their mind during a political campaign. And so what you do is you find out what they think, and then you say, okay, because you think that, vote my way. I mean, that's why politicians are constantly running polls. And we had gotten ahold of some of the tobacco companies' polling, which is why they were promoting these cost to government and freedom issues. And they couldn't run an ad that said, "Protect your right to breathe benzine and formaldehyde and dimethyl nitrosamine, lead, and all the other stuff, in secondhand smoke. Vote no on 5." They had to acknowledge the problem. And it's like, "Well, secondhand smoke is bad, but Proposition 5 just isn't the answer. It's worse."

03-00:40:14 And what I said was we just tricked the tobacco companies—we didn't set out to trick [them]; we set out to win, but we tricked them into basically running the world's biggest public education campaign that secondhand smoke was a

problem. And I think that defeat is really what put us on the tracks to all the subsequent victories, because it really cemented the issue of passive smoking as a legitimate topic of public discourse. And in 1980 when Paul came to me and said, "We want to try again; would you be willing to volunteer to help with the campaign again?", I figured we would lose, because by then I had done, and others had done, enough analysis that showed that if we even had a very minor impact on tobacco sales, by reducing the opportunities to smoke, or undermining the social acceptability of smoking, it would cost the tobacco industry just a ton of money, and they were going to spend whatever it took to beat us. But I thought, it's worth it to have the fight, even if we lose, to further build public engagement around the issue. And normally you don't get into a political fight you don't think you can win, but there are times that it's worth doing it either just as a point of principle or because you think that the debate surrounding the issue will contribute to a longer-term success.

03-00:41:57 Well, after we lost the second time, we decided, well, enough public education; we want to win. And so we all got together at Peter's house over in the Berkeley Hills, in I think it was December of 1980 after we lost the November election, and took the [501(c)4] corporate entity, which had been the campaign, and renamed it Californians for Nonsmokers' Rights, and started doing grassroots organizing, and what today would be called providing technical assistance to local communities. Because by that point we knew we couldn't win in the legislature, because the industry dominated the legislature. That was what led the people who got Prop 5 going to go the initiative route, and they realized they could not win in the legislature. And we couldn't raise enough money to run a successful campaign. And I knew from the Whose Money Matters thing that we didn't have to match them dollar for dollar, but we had to have enough, and we could raise about half a million dollars, and they had $6 million, and half a million wasn't enough. We didn't need six million but we needed enough. And we knew the public was on our side from the polling the industry had done. And so the idea was to find venues which were smaller, where the resources that we could muster were enough to win.

03-00:43:40 And there was a very influential political science book that came out a little before that, written by a guy named [Elmer Eric] Schattschneider, who did an analysis of the Civil Rights Movement, and found that the venue was very important; that you not only have to be right but you need to be in a venue where you're strong. And he had argued that Civil Rights started making progress when it moved it away from the South and nationalized the issue. And we had learned the situation for tobacco was just the opposite: that the venue where we were strongest was the locality, because local politicians are more sensitive to local constituents than people who are further away at the state or national level. And the resources that you could mount were often enough to overcome opposition from the tobacco companies, because generally they would bring in outside lobbyists who didn't have any credibility with the local policymakers.

03-00:44:51 And so the organizing idea behind Californians for Nonsmokers' Rights was we knew what to expect by then from the tobacco companies. We knew what the arguments were going to be. We knew what the answers were. And we would look around for local communities where there were a handful of people who were willing to spend a year or so working on this, and we would go in and basically train them and provide them with technical support. It took a year, but the first city in California to pass a—well, actually, they had gotten something through in Berkeley before Proposition 5, but that's why if you go around Berkeley there's still in some of the restaurants "We have a nonsmoking section" signs in the windows all these years later, even though they're smoke-free. But the first place we won was Ukiah, which is a small town 100 miles or 150 miles north of here, on the way up to the Redwoods. And we essentially got Proposition 10 passed through the City Council there, and then started—

03-00:46:11 And the tobacco companies' basic arguments against all health policies is: if you do this, the sky will fall. And the sky didn't fall in Ukiah, and, in fact, it was very popular, and so the next year we got three, and this started building up. And that policy is still—what we found, at least here in the US., was you can make a lot more progress working at the community level. If you come forward to today, one of the hot issues now is getting rid of flavored tobacco products. Well, the FDA has the authority to do that now. They haven't. And what did we do? Well, there were several other cities that passed partial flavor bans. Here in San Francisco, we got a full flavor ban [ban on the sale of all flavored tobacco products], and then that became the precedent, and there's about 300 such laws around the United States now, including several states, and it's sort of, okay, the tobacco companies are continuing to dominate national policymaking. We finally, last [California Legislature] session, got essentially the San Francisco ordinance passed at the state level. The tobacco industry has rolled in and forced a referendum on it, so it's been suspended until the next election [in November 2022], but I'm quite confident now that the health groups, they've become much more politically sophisticated about this. And it's going to cost a bunch of money, but we're going to beat them.

03-00:47:50
Burnett: Right. So much in here turns on conceptions of what's right, moral conceptions; on conceptions of political philosophy; on the nature of liberalism, what is a classically liberal social order; and a conception of risk, right? And there are varying degrees for understanding of risk. And all of those seem to be in play in the case of COVID, surrounding mask use or vaccinations. This idea that I think used to be common, back to John Stuart Mill, that you're free to do what you want so long as you do not hurt anybody else, that's the basic, basic notion of liberalism. What's interesting in the COVID case and in the smoking case is that there is this advocacy around freedom that has this conception that obscures the harm that the exertion of one person's freedom has on other people. And I'm wondering if that's what's animating some of the moral issue, for you and others, that there's this sense

that people are saying, "I can do what I want; I'm not hurting anybody," and your understanding of the evidence that they are.

03-00:49:32

Glantz: Right. Well, first of all, the only thing I would—well, when you talk about classic liberalism, that, to some extent, would be called classical conservatism today, so I want to just be clear about that. But an interesting thing that we found in one of the research papers we did somewhere along the way [Glantz S, Begay M. "Tobacco industry campaign contributions are affecting tobacco control policy making in California." *JAMA* 1974; 272:1176-1182] was that Republican politicians are much more supportive of the tobacco industry than [Democratic politicians] are, although they give lots of money to both, and there's lots of Democratic politicians who are terrible on the tobacco issue. But on average, the Republican politicians are worse. But if you look at polling among voters, it's just the opposite: conservatives and Republicans tend to be more anti-smoking than liberal Democrats. And it may have something to do with education; it may have something to do with income, because better-educated, better-off people are much less likely to smoke now. Now, that wasn't always the case. It used to be just the other way around. But as better-educated, better-off people said, "Jeez, this is bad for me; I'm going to stop doing it and stop buying these products," the industry shifted their targeting to minorities and poor people. But that's a whole other dimension of this.

03-00:51:07 But, yeah, the industry really glommed onto this freedom argument, because they didn't want to deal with the science, and the emerging evidence that this stuff is bad. And the number of times I was in debates on TV and radio and other venues where people said, "Well, freedom, freedom, freedom," and I would say, "Well, your right to swing your fist ends where my nose begins." And I think the freedom argument, if you can actually engage it in a venue, actually supports the health people. But the tobacco industry, that's been one of their central arguments. And, in fact, years later we did a tobacco documents paper called "To Quarterback from Behind the Scenes," [Fallin, A., R. Grana, and S. Glantz. "'To Quarterback Behind the Scenes, Third Party Efforts': The Tobacco Industry and the Tea Party." *Tobacco Control* 23, no. 4 (2014): 322–331.] which was a direct quote out of one of the documents. And we were able to take what is today the Tea Party, and trace it all the way back to the tobacco industry in the 1980s, because this local organizing strategy that we developed worked. And California wasn't the only place doing it—it was sort of simultaneously emerging in Florida and Minnesota and Arizona, a few other places—but it was strongest here.

03-00:52:41 And the tobacco companies—and we now know this because we can look into tobacco industry documents and see them discussing this—they understood probably better than we did the power of local organizing. And so they did two things: one was they started pushing to get state laws preempting local action passed—we managed to keep that from happening here in California,

but at its peak about half the country had them, and some of those laws are still on the books—and freedom. And they went out, and they realized that sending a big-time lobbyist from Sacramento into some small town to argue against a smoking restriction that was clearly supported by people who actually lived there didn't work. And so they went through several waves of trying to generate a grassroots smokers' rights movement, all of which failed, because most smokers wish they didn't smoke. Most smokers were trying to quit smoking. And also because of the demographic shifts in who was smoking, they tended to be relatively poor people, relatively powerless people, relatively politically unsophisticated people. And so when these people would show up at hearings, they'd act off and behave—because I was at some of these hearings—they would behave in ways that would alienate the politicians by accusing them of being Communists and Nazis and things like that.

03-00:54:24 But that effort, that PR effort and organizing effort, you can trace the Tea Party all the way back to that. And, in fact, when we published that paper it got the head of NIH yelled at by the Republicans in Congress. And usually when we had a hot paper coming out I would tell the people at NIH before it came out and so they would be warned, but that time I forgot, and about two days later the head of NIH was getting chewed out by a Republican on the Appropriations Subcommittee, and there was a big investigation, all kinds of other stuff.

03-00:55:05 But that theme and the theme of undermining science, and saying you really can't believe these scientists, that they're biased, they're against freedom, blah, blah, blah, and that was a very systematic effort that was developed by the tobacco industry. It actually predated them. The lead people had done it, as the evidence of lead and childhood lead poisoning was coming out, beginning in the thirties. The sugar industry was out there doing it before tobacco, but tobacco took it to a whole new level. And one of the things they did was they knew by then—this is by the eighties and the nineties—that they had very low credibility with the public, and they needed to stay in the shadows. So what they would do is go out and recruit other industries—pharma, petrochemicals—any industry where science could be the foundation for regulations that could hurt their profits. And they invented the term "junk science." They developed something called the Association for Sound Science [Ong E., and S. Glantz. "Constructing 'Sound Science:' Tobacco, Lawyers, and Public Relations Firms." *Am. J. Pub. Health* 91 (2001): 1749–1757]. Well, who's against sound science, you know? [laughter] But it was run by these PR guys, and it was all designed to undermine the credibility of the scientific community. And that all was foundational—you can just trace that just straightforwardly—to a lot of the anti-science, anti-COVID stuff that's going on. And it was taken up in a very big way by the oil industry and the energy industry, to fight climate change, global warming research; the sugar companies, and the junk food companies. In fact, a lot of the same people that got their start in tobacco kind of graduated to work in these other areas. And

so a lot of the, "I'm not going to wear a mask" stuff just grows straight out of the efforts by the tobacco industry and then is taken up by other industries to just say, well, this is all—They invented the term "nanny state," which you hear thrown around.

03-00:57:33 And you would have thought that people fighting these other issues would have instantly seen these connections, and they're pretty well accepted today, but I was in a film, a documentary called *Merchants of Doubt*, that is mostly about global warming denialism, but it starts with tobacco. And when the film came out, they premiered it here in San Francisco at the American Geophysical Union meeting, and they showed it at the Metreon, which is a big multiplex downtown. And I went down with my wife, and we watched it, and I was sitting just sort of like this, and we watched the film on a big screen. And I had a suit on in the movie, and it was not orange; it was black. [laughter] And when the film ended, this guy sitting next to me was a geophysicist who worked on global warming, looked at me and said, "Was that you in the movie?" And I was like, "Well, yeah." And he said, "You know, I never thought that there was this organized campaign to confuse and discredit the science." And it's like, yeah, that's right. You need to appreciate that.

03-00:58:59 Because one of the pushbacks that the tobacco companies use—and, again, they weren't the first, but they were very aggressive, and it's been copied by other industries—is just to aggressively attack anything they don't like. And they understand science better than the scientists do, I think. In science, you're trained to keep an open mind, to be self-critical. No study is perfect. All theories are tentative, and subject to change. And these are all very, very important and strong values in science that lead to progress. But the tobacco companies and these other industries have weaponized that, and they just go after things, and they do it to discredit the source, and they go after people personally, too. Another thing scientists are taught is it's not about the person; it's about the ideas. And the tobacco companies and these other corporate interests know that it's not just ideas that get them; it's people. And they go after those people to try to convince them to not work in that area. And it's not just the scientists. I mean, I've had journalists tell me, "I know if I do a story on tobacco I will be less productive, because not only do we have to carefully research the story, and carefully write it"—which you should do for everything—"but then some powerful forces will complain to my boss, and I have to defend it, and maybe they'll sue us, and then we have to deal with all of that." So they raise the cost of doing the work. And to say to people, "Why don't you go study frogs or something that don't bother you," although frogs could show up environmental carcinogens and endocrine disruptors, so—[laughter]

03-01:01:11
Burnett: Yes, that's a case at Berkeley, right?

03-01:01:15
Glantz: Yeah, that's exactly right. I kind of lost my train of thought.

03-01:01:23
Burnett: Well, there's—yeah.

03-01:01:25
Glantz: But these things all—well, I remember what I was saying. And so what a lot of scientists tend to do is when they become aware that they're likely to be attacked, they tend to pull back on what they were saying. And you definitely don't want to put anything out there you can't defend, and if somebody comes up with a legitimate criticism you need to be willing to be open to it, but people often pull their punches and lowball the estimates of effects, figuring if they're super cautious about that it will make them less open to attack. And my experience has been just the opposite: that by lowballing the effects, and being overly tentative in your conclusions, it makes it easier for you to be attacked. And I always say you should put forward what you think, and then defend it, and if you can't defend it then you shouldn't say it.

03-01:02:33
Burnett: Right, right. Well, there's another irony here, and it makes me think of that expression, a strategy, that you accuse others of that of which you are most guilty. And this turns on the question of freedom. Can you talk a little bit about addiction? Because a free agent has to be free to enter the market, right? You have to be free to choose to purchase a product because you want it, not because your body needs it, right? And so can you talk a little bit about this strategy of freedom with respect to marketing an addictive substance?

03-01:03:21
Glantz: Yeah, now, that's not an area I've personally done a lot of work in, but it's certainly something I'm very familiar with, and, in fact, that issue has been at the nub of a lot of the litigation that developed later against the tobacco industry, and that is they knew that nicotine was addictive back in the sixties. In fact, probably the most famous single quote out of a hundred million pages of tobacco industry documents we now have is "We're in the business of selling nicotine, an addictive drug," which came from Addison Yeaman, the Senior Vice President and General Counsel of Brown & Williamson Tobacco, which was the British-American tobacco subsidiary. And I think he said it in 1963, internally, but the tobacco companies were still—I mean, the famous [congressional] hearing in April of 1994 that Henry Waxman held, where they all said nicotine is not addictive. But the industry was way ahead of the general public on that issue, and, in fact, knew, did a lot of research on how nicotine addiction works, and then used that in the design of their products, but their public posture was that nicotine is not addictive. In fact, they're still saying this today: it's just like caffeine and coffee.

03-01:04:50 And the point is that most people start using tobacco when they're kids. I think the median age of first use is around twelve to fifteen or somewhere. And the

idea is that if you're marketing this stuff to kids, and getting them physically addicted, then the decision to use the product is not a free choice anymore. And, in fact, we now know from neuroscience research that nicotine actually changes the prefrontal cortex and the part of your brain that's involved in decision-making. And once you get people addicted to something, they're no longer making a free choice.

03-01:05:38 And this argument, it's been very important legally in two areas. One is in the litigation against the tobacco industry, and the fact that they went out and addicted all these kids so they could make money off of them for years and years and years. And the second area has been in fights over FDA regulation of tobacco, because one of the arguments under Obama the FDA made—because they do these cost-benefit analyses, and say, "Well, you can't issue a regulation if the benefits don't exceed the costs." And there's a whole thing around the industry's role in creating all of that. But what the FDA did is they said, "Well, it's true that there's all this disease and death that you would avoid if you put warning labels on tobacco products, but you're also depriving people of the pleasure of using the products, and so we're going to count the lost pleasure as a cost which then offsets the benefits."

03-01:06:57 And we actually wrote, through something called "consumer surplus," a couple of papers about that, saying that the FDA's cost-benefit models were nonsensical when you put them up against what we know about the neuroscience of nicotine addiction [Song, A. V., P. Brown, and S. A. Glantz. "When health policy and empirical evidence collide: the case of cigarette package warning labels and economic consumer surplus." *Am J Public Health* 104, no. 2 (February 2014): e42–51; 341. And Song, A. V. and S. A. Glantz. "Assessing tobacco regulation: moving beyond economists." *Tob Control* 24, no. 2 (2015): 123–4]. But the problem is—because I had lots of arguments with people at the FDA about this—the guys doing that modeling were economists, okay, who don't know shit about biology. Because we put public comments into the FDA. We wrote peer-reviewed papers about it. And I was in meetings with some of these guys, and it's like, "I don't understand that so it doesn't exist." And they have a kind of ideological frame based on rational decision-making, which is what most, or in fact all, of classical economics is based on rational decision-making, and you're talking about a drug which actually biologically changes the decision-making part of the brain and takes it over. And it's like, "I don't know, I'm not a biologist. I don't understand all this PET scans and stuff." And it's a real problem.

03-01:08:25
Burnett: I'm not sure, but it's a bit redolent of Gary Becker's work on addiction.

03-01:08:35
Glantz: Oh, yeah, it all grows out of Becker's stuff, and if you read it, which I have, it's just completely disconnected from what we know about the biology. It's all based on economic theories. And another problem—and this is an example of

how you learn something that you're just looking at from a purely academic point of view that ends up having some practical value later, is when I was an undergraduate I was an engineering student but I really liked math, and I took a bunch of theoretical math, including a course on number theory. And this is very abstract stuff. It begins with there's something called Peano's postulates, which numbers grow out of, and the first one is there exists a number one, you know? And one of the things you learn is that when you talk about ordering things, in a sense of one, two, three, four, rank ordering things, you can only order things that are one-dimensional. If you have something that's two or more dimensions, there is no way to order the points in a way where the ordering remains if you change things around, whereas if you're numbering a one-dimensional line there is a strict ordering. If A is greater than B and B is greater than C, then A is greater than C. And that transitivity falls down in a multidimensional system, and that's something you learn in number theory.

03-01:10:22 Well, when you go back to Becker's work, and the work on consumer surplus, economists are always optimizing something called utility, which is broadly like, "Is this good or not? Do people want this?" And if your utility is measured in a single dimension—well, utility is a one-dimensional thing, and you're ordering things to maximize utility. Well, if you're talking about addiction where there are multiple dimensions to the behavior, you can't order things. You can't optimize things. Because to optimize something, you need to be able to order it. And we said—and this was like total heresy, these arguments we were making—that this whole consumer surplus theory falls apart when you're talking about an addictive substance because it requires optimization, which requires a one-dimensional ordering, and it's a multidimensional process, so this whole thing is ridiculous.

03-01:11:28 Now, if you talked to people who knew about neuroscience, or behavior related to addictive substances, they said, "Yeah, this is all obvious," but to these economists who that's part of their belief system, it was hopeless.

03-01:11:47
Burnett: And you said "we." Did you publish on this?

03-01:11:54
Glantz: Yeah, yeah, we published. Anna Song, who was a fellow at our place and is now a professor at UC Merced, who did a lot of work on addictive behaviors—and she wasn't my primary mentee, but she and I worked together on this stuff and ended up writing a couple of papers about it, in addition to putting public comments in to the FDA about this whole cost-benefit analysis thing. And I don't want to paint the FDA and the federal government with one broad brush. There were people inside government who were really happy that we were putting this stuff in. But in the end, the guy who was the head of the Office of Management and Budget at the time, who was a guy from Chicago, who was a big behavioral economist—

03-01:12:55
Burnett: George Tolley?

03-01:12:58
Glantz: No, I think it was Peter Orszag, maybe? I don't remember, but was big into this stuff, and it just hit a wall in the Obama administration. [It was Cass Sunstein, who was Administrator of the White House Office of Information and Regulatory Affairs in the Obama administration Office of Management and Budget from 2009 to 2012.] Now, from what I've heard through the grapevine, it's sort of weakened, but it's still a big issue out there, and this is great for whether you're talking about tobacco or sugar-sweetened beverages or any of these bad products, because one of the things that comes out of cost-benefit analysis is the short-term costs, which are usually what you incur to put the policy in place, always kind of overwhelm the long-term benefits. And so the whole cost-benefit paradigm is innately pro-corporate, and against change. And, in fact, one of the things that, if you fast-forward years later, in the research that I've done and we've put into this big—there's a thing called the Tobacco Center of Regulatory Science, which we have at UCSF, which I got funded and then re-funded, and ran up until I retired [at which time Pam Ling took over as PI]. We put a lot of emphasis on the short term, and what are the immediate effects of tobacco use, what are the immediate effects of e-cigarettes and these other products, rather than focusing on long-term damage, things like cancer, because when you put these into a cost-benefit analysis, things in the future are heavily discounted, whereas if you give somebody a heart attack now, or next year, that is going to have much bigger impact in terms of what's called discounted present value against the current costs, and it tends to move the cost-benefit relationship in favor of doing something about it.

03-01:15:03
And another area, working with a guy [UCSF faculty colleague] named Jim Lightwood, who's an econometrician, we published a whole series of studies now looking at the short-term health costs, savings associated with reducing smoking, because up until we came along all of the analyses of smoking costs society gazillions of dollars, or, in fact, everything, looking at costs of illness generally, were always based on the long term. [See, for example, Lightwood J., S. Anderson, and S. A. Glantz. "Predictive validation and forecasts of short-term changes in healthcare expenditure associated with changes in smoking behavior in the United States." *PLoS One* 15, no. 1 (January 2020): e0227493. doi: 10.1371/journal.pone.0227493. PMID: 31945079; PMCID: PMC6964879.]. And one thing I learned from the policy work I did, fighting these initiative campaigns, doing lobbying in the legislature and things like that, is politicians don't really care about the long term. They care about the next election, and trying to get this year's budget through, and maybe next year, and if they're really a long-term thinker the year after that, but something twenty years from now they don't care about. They may give it lip service but they don't really care about it.

03-01:16:08 And so the biological work that we did showing the immediate effects of secondhand smoke on vascular function and platelets and things like that, which led us to think you're going to have an impact on heart attack risk quickly, because those are things that change very fast, and then the work we did beginning with the Helena study, where we showed that when you put a smoking ban in you had fewer heart attacks the next month, I said, "Well, we ought to be able to detect that, because they're big effects, in medical costs." And so using a bunch of very fancy econometric techniques that Jim taught me, we were able to actually estimate, if you changed smoking this year, what happens to medical costs next year, and found big short-term effects. And that finding has helped to animate a lot of policy change. By saying, look, the benefits of tobacco control aren't just—I mean, yeah, twenty years from now there's huge benefits, but there's already pretty big effects right now and next year. And we were able to actually estimate what's called a cross-elasticity between changes in smoking this year and changes in medical costs the following year, which is like instantly. And I don't remember the numbers offhand, but they're big. And that fact has, for example, helped to protect the funding for the California Tobacco Control Program, because people in the Department of Finance have accepted this, and so they realized—

03-01:18:07 If you look at California, and you look at the demographics of California, the amount of money that the State has to spend on things like MediCal, which is Medicaid in California, are a lot lower than you would expect them to be if you just look at the raw demographics of the MediCal population here. And we think that difference is because we have such low smoking rates in California because of all the State's anti-tobacco work over the last thirty years. And, in fact, Jim did a report and we got a paper in peer review now that over the first thirty years, aggregate medical costs in California are about half a trillion dollars less than they would have been had we not had the State's anti-smoking program. [Lightwood JM, Anderson S, Glantz SA. Smoking and healthcare expenditure reductions associated with the California Tobacco Control Program, 1989 to 2019: A predictive validation. PLoS One. 2023 Mar 16;18(3):e0263579. doi: 10.1371/journal.pone.0263579. PMID: 36928830; PMCID: PMC10019627.] And that I know, because when Arnold Schwarzenegger was governor I talked to the Head of the Department of Finance [Mike Genest] about this stuff, and he had his economists look at the work Jim and I had done [at the time], and they said, "Yeah, we think you're probably right." In fact, that's one of the reasons that cigar-chomping Schwarzenegger actually left the anti-smoking funding alone, is because it substantially reduced the State deficit, which was a big political issue back then.

03-01:19:37
Burnett: Well, there are so many pieces to this. One is what's clear is that you're paying attention to the epistemological frameworks of the people that you're dealing with—you have to understand how people rationalize and provide evidence to support their claims. Even if there's a cynical side to the tobacco industry,

you're dealing with regulators; you're dealing with economists, who may or may not support a position, but they have their own epistemological frame, to which they're very wedded. And one observation is that benefit-cost analysis emerges in the early seventies as a response to the local, state, and federal demands for some kind of adjudicatory mechanism for managing claims of things like air pollution, right? And so they need some kind of metric, because you're dealing with thresholds. What threshold of health can you demand, at what economic cost, to manage the pollution from a smokestack, over what air shed, and how are those people affected, and how does that impact go down over space? So that's one thing, but—

03-01:21:12

Glantz: Well, actually, though, it's interesting, what you're saying, because there was actually a book written about this by some of the former people in the Obama administration [Frank Ackerman and Lisa Heinzerling. *Priceless: On Knowing The Price Of Everything And The Value Of Nothing.* The New Press, 2005]. If you look at the Clean Air Act that deals with air pollution, it doesn't have cost benefit analysis in it. And so a lot of the stuff that the Clean Air Act did probably would have failed by cost-benefit analysis measures at the time, and the whole push for cost-benefit analysis was an industry response to the Clean Air Act.

03-01:21:52 Now, interestingly, when people went back twenty years later the cost-benefit analysis when done in hindsight, when you have a lot more information, ended up being very favorable to the environmental regulations, but yeah, you're right. And this gets back to what I learned doing the SWOPSI course: you have to say if you found this out what difference would it make. And we were talking in one of the earlier meetings about knowing your audience, and speaking to your audience. And one of the things I had learned is that if you want to get in a fight about the economics, you need to fight about the economic issues that the audience, the policymakers, actually care about, which is the short run, and the long run is extra gravy, but the real benefits that motivate and animate decision-making are: is it going to help or hurt me making the budget this year and next year? That's it.

03-01:22:53

Burnett: So you've really stretched yourself, and I think that's a pattern. I do wonder if you get bored easily, because you have taught yourself sciences. Once you had your formal academic training, and you had your first position according to your academic training, you migrated into biostatistics. You migrated into economics. You migrated into these other fields, in part spurred by that early interest and passion for mathematics, let's say, just looking at Peano's postulates and that kind of thing. But you do have an academic position during these years, and you pass from being an assistant professor to associate, so you make tenure in '81. Do you have full tenure under that system?

03-01:23:51

Glantz: Well, no and yes. [laughter] I had gotten—and I think we talked about this—an in-residence appointment, which was developed at UCSF [and spread across the UC system] as a way to give people status, even when you don't have State funding. But I, because of starting the bioengineering program, ended up with full tenure, but very few faculty at UCSF have traditional tenure, just because there's so little State money there because we don't have any undergraduates. But, yeah, by then, I don't remember the exact date, but I ended up with full—I think when I was promoted to Associate Professor was in residence [in 1981], but then later it was converted to an FTE [in 1983].

03-01:24:40

Burnett: Oh, okay. Yeah, '81-82, that academic year you became Associate Professor of Medicine. But I want to ask, then, because we've talked a lot about this intellectual plasticity and growth, and your policy commitments, and your moral commitments to this work in those years. Can you talk to me about how the cardiovascular research fits within that? I assumed it did, but as I hear you talking, the less and less sort of straight biomechanics of the heart fits into this picture. Can you fit that in for me?

03-01:25:25

Glantz: Well, the biomechanics work I was doing, that had a separate track from the stuff I got into in tobacco, and the tobacco stuff kind of—the early work that I did—I mean, there was an AAAS little essay I wrote that kind of set it up, and then getting involved in the Proposition 5 campaign. But then the work I did related to tobacco for the first probably eight or ten years was really what I would call public education, and taking the work that was out there and translating it into English, and sort of a public education science transfer thing. And I wasn't really doing a lot of research in that area. I did in I think it was the Prop 5 campaign, because, again, I had a PhD minor in Engineering Economic Systems. I did a cost-benefit analysis showing that Prop 5, if it would probably have a small effect in reducing smoking because of social acceptance issues, and that would end up saving money. But if you go back and read that today, we grossly underestimated how big a change there would be.

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But I didn't start actually doing academic research in this [tobacco] area until much later, when Bill Parmley and I were looking at vascular effects of cigarette smoke, and then the big review we published in 1991 [Glantz S. and Parmley W. W. "Passive smoking and heart disease: Epidemiology, physiology, and biochemistry." *Circulation* 83 (1991): 1–12]. And I was also doing some work doing more formal policy studies, beginning around 1989 or 1990. But that was sort of a hobby that ended up taking more and more and more time, and I viewed it as, and the university viewed it as, consistent with the university's public education role, and because you're a faculty member, it's teaching, research, university service, and public service, and so this was public service, public education. I was just probably doing a lot more of it than a lot of people do. But that was that, and it was interesting.

03-01:28:02 But the cardiac mechanics stuff was really much more kind of basic research, and I hadn't really been thinking about what are the policy implications of this stuff. It was like fun, [laughter] and it was interesting, and we were pushing forward ways of thinking about these problems that were innovative and different and, in their own way, very controversial, some of them. And I really liked doing it. And the things that led me finally to close the lab were my technician retired, and this guy—his name was Jim Stoughton—was an amazing guy who made it really easy to run the lab. He was an opera fanatic, and all we had to do to keep him happy was we never did experiments on days he had opera tickets. And he liked to travel, so it's like, "When do you want to go travel? We'll just close the lab while you're traveling." Because this guy was worth his weight in gold. And when he retired, I just couldn't find anybody that was thirty percent as good as he was, and so a lot of the stuff he'd been doing fell on me, in terms of day-to-day management and training of the fellows on the mechanics of doing these experiments we were doing, and that increased the workload that I had dramatically.

03-01:29:43 And then the other thing that was going on at the time was that the NIH was getting less and less interested in sort of classical physiology, and pushing everybody to become a molecular biologist. And I just didn't think molecular biology was that—I'm not against molecular biology, but it's just not what I wanted to do. And so it was getting harder and harder to keep the lab funded. It was taking more and more and more of my time. And, at the same time, you had this other track that was developing in the tobacco area that was, after many years of it being viewed as kind of a marginal activity, opportunities were opening up to do more of it. And so finally I just said, "I'm going to close the lab and focus on this other stuff," although I continued to do it, and up to this day, even though I'm retired, I'm continuing to be engaged in cardiovascular research. But the experimental part of it is being done in collaboration with other people who actually run the labs.

03-01:30:57
Burnett: Right. And it was mid-nineties that that was shut down?

03-01:31:00
Glantz: It was the mid-nineties, yeah. It was mid-to-late-nineties. I don't remember exactly. Because these things also have long tails on them, so even when you stop doing experiments, by the time you're working everything through peer review it was another year or two.

03-01:31:17
Burnett: Right, right. Well, the heart is involved in the issue of the effects of smoking on the body, and that's something that you are interested in.

03-01:31:30
Glantz: Oh, yeah. Yeah, it's more the vascular system than the heart, but yeah.

03-01:31:33
Burnett: Right, right. So there's more to say about the smoking work in the eighties. You do publish, with someone else, Tye—T-Y-E—

03-01:31:52
Glantz: Yeah, Joe Tye.

03-01:31:54
Burnett: —and this is an instance, I think, of the industry as a public health vector.

03-01:32:02
Glantz: Right.

03-01:32:03
Burnett: And then there's an interesting paper on the cost of animal regulations in research, and then the Parmley piece. So I'm wondering if we could take a look at those, and sort of talk about how you begin to work with Bill Parmley specifically on the effects of secondhand smoke on vascular function.

03-01:32:28
Glantz: Right, right. Well, the Joe Tye paper, there was a lot of arguing about cigarette advertising back then [Tye J., K. Warner, and S. Glantz. "Tobacco Advertising and Consumption: Evidence of a Causal Relationship." *J. Pub. Health Policy* 8 (1987): 492-508]. Well, there's always arguments about that, but Joe Tye was very interested in—he was running some effort to restrict advertising to kids or something; I don't remember. And, I mean, if you looked at the advertising, the amount of money, the argument that the tobacco companies were making, and still make, is that all the billions of dollars they spent on marketing is just directed at competing for market share, not for recruiting other new customers. And we just looked at does that argument hold up when you put it under a microscope. And the thing is there are many, many brands of cigarettes, but back then there were only four tobacco companies: Philip Morris, Reynolds, Brown & Williamson, and then American. And Brown & Williamson, American are really small compared to the other two. And so the question is if you moved somebody from one Philip Morris brand to another, the impact on company profitability was pretty marginal. I mean, some brands are a little more profitable than others, but basically moving people around within a company's brands had very little effect on company profitability.

03-01:34:08
And so we just asked the question: if you look at it strictly from a rational business perspective, does the amount of marketing that they're doing make sense? And the answer was no, that if you just look at switching between companies, or defending your market share, the amount of money that was being spent was way out of proportion, especially given that people are very brand-loyal to tobacco products, and that's one of the reasons tobacco companies work so hard to get them when they're young is that they can establish people to a brand, they tend to stay with it a long time.

03-01:34:56 And then we said, well, what if instead of looking at advertising as a current expenditure, which is the way most businesses look at it—it's like if I'm spending money to try to get you to buy a car, are you going to buy a car this year—and instead look at it as a capital investment, where you put money into recruiting a new smoker, who's going to get addicted and stay addicted for twenty-five years, where you're not generating a current bit of income but you're generating an income stream, and then you look at the discounted present value of the future income stream, it was about what they were spending on advertising.

03-01:35:37 So this was kind of a side project that I did because of my interest in economics, but, again, it was an area to bring several—see, I always like bringing different disciplines together. And Joe had approached me about this, and it seemed like an interesting thing, so that's what led to that paper. But these were little side projects, until the thing that really got me into the science on this was the work with Parmley. And Parmley had been studying vascular function, and he was one of the early people looking at determinants of vascular function. And back then people didn't really appreciate nitric oxide as a thing that controls vascular relaxation. And, in fact, the guy who figured that out got a Nobel Prize for it. But they were doing studies looking at what determined relaxation of arteries, and I just said, "Well, why don't we look at cigarette smoke?" Because he was looking at drugs and that, so, well, let's do some cigarette smoke studies. And so he said, "Yeah, that's a good idea," so we kind of got into that. And then that led to that 1991 review paper that he and I wrote, which has been cited a lot, and the idea was to sort of pull together a wide range of disciplines and studies, and see what's the bigger picture when you put them together, which, again, is another thing I like to do. And so we were pulling stuff from various areas—from epidemiology; from vascular biology; from other areas, platelet effects—and putting it all together, and say, "Well, when you bring these disparate benefits of information together, what picture emerges?"

03-01:37:52 And what we ended up saying there was that, well, secondhand smoke has a lot bigger effects on cardiovascular risk than people thought, based on the dose, and here's the beginnings of some reasons why you're getting such big effects at such low doses. That was basically what that paper had to say. The industry went crazy over it. They hired a bunch of experts to write letters to the editor criticizing it, not disclosing their industry connections of course. [See Landman A. and S. Glantz. "Tobacco industry efforts to undermine policy-relevant research." *Am J Public Health* 99, no. 1 (2009): 45–58. for the details, based on the industry documents.] But that paper has really stood the test of time, and that kind of helped launch a whole line of work. We got some funding from the tobacco-related disease research program, which UC administers on behalf of the State of California, using money from the tobacco tax to start looking at this in a more systematic way. But we had tried with NIH, and it's like they weren't interested.

03-01:38:57
Burnett: Interesting.

03-01:38:59
Glantz: They said, "This isn't mechanistic enough." Of course, in the end these underlying mechanisms got somebody a Nobel Prize, but never mind that. But that kind of got that work going. I, one way or another, have on and off contributing to these studies of vascular effects of tobacco smoke, e-cigarette, aerosol, other products.

03-01:39:27
Burnett: What's fascinating—

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Glantz: But there were really two separate lines of investigation, from the cardiac mechanics stuff I was doing.

03-01:39:36
Burnett: Right, right. I mean, it is interdisciplinary—

03-01:39:41
Glantz: Yeah.

03-01:39:42
Burnett: —work, and it's an argument. It's an argument. You begin with biostatistics, and there's this assessment of the risk, and what other confound—it's actually reminding me of Chicago economics papers, in that you're anticipating criticism, and maybe you've habituated yourself to that over the years, but, "What if it's this?" And then, "No, it's not that." "What if it's this?" What would be an example? You're measuring the effect on the health of nonsmokers whose spouses smoke, right? And so the effect of that. And arguing, well, they might be closet smokers, [laughs] or they might be—and they're saying there are all these possibilities, but, in fact, if we did measure this effect, and smoking in the home is not as toxic as smoke at work, where there are multiple smokers and the ventilation, et cetera, et cetera. And so there's that. Then you move into physiology, and how damage to the system works. Then you talk about biochemistry, and the various mechanisms, biochemical mechanisms, by which that damage might take place, that would account for the acute effects of secondhand smoke. So there are the polycyclic aromatic hydrocarbons and things like that. So it's more in keeping with that broad catholic conception of science, that there are these different ways of making a truth claim, different types of evidence, and you wanted to bring that together, fully understanding that there would be criticism, right?

03-01:41:44
Glantz: Yeah, that was true, and that is sort of the classical way you think about this, from an epidemiologist's point of view. They call it the Bradford Hill Criteria. And one of the things is what they call biological—you found an association in your epidemiology, and is it biologically plausible? And that's thinking from around the sixties. I actually think the Bradford Hill Criteria is obsolete,

because we know so much more about mechanisms now than we did in the sixties. Plus, epidemiology is kind of crude. You have so much variability in any real-world study that if there's a signal there you can detect, it has to be pretty strong. I mean, there's always the possibility of it being a statistical fluke, but if there is actually an effect, it needs to be pretty strong to be able to see it, given all the variability that you see among people, and people's exposures, and difficulties in measuring exposures, and all of that. And I really think today we should be doing it the other way around, kind of like physicists do, and that is if we look at the biology, there are these adverse biological effects that are easier to look for, at least, in experimental situations. And if you then go out into the real world, can you detect it? So it's like a physicists does theoretical physics and said, "Oh, there ought to be some particle that's causing—and it will look like this if we go look at a cloud chamber." And then you go look for it. And I think that that's how we should—

03-01:43:49 Now, this is not the majority view among epidemiologists—they're still all wedded to biological plausibility—but to me it's like, well, these things are happening, and we've seen them at a molecular level. We've seen them in maybe test tube or petri dish studies. We've seen it in animals, maybe in clinical studies in people. What does it look like in the population? And to me, the whole idea of this—and this is a description, I guess, with lots of people—to me, doing this, trying to decide does A cause B, to me it's like being given a puzzle where you have a bunch of pieces. You don't have all the pieces. You have a bunch of pieces. Some of them are torn or deformed. None of them are perfect because there's something wrong with every study. If you look at the molecular biology studies, they're very good in terms of making causal statements about if you pour the pink liquid and the red liquid together they react and explode, but it's a very artificial environment compared to the real world. And as you move up toward population studies, the artificiality goes down, but then the noise and the worrying about confounding variables and are you missing something, that problem goes up.

03-01:45:14 And so, to me, the question is: if you look at all of this together, what's the picture that emerges? And that, to me, is the way you should be doing science, and especially science when you're talking about in a policy context, because the policymakers want to know is there enough evidence to warrant action, and they don't really care about all these technical details. What industry does is just the opposite: they take every study and pick at it, and say, "Well, but what about this, and what about that, and this isn't perfect, and this is a molecular biology study but these are not people, and if the people—well, but how do you know there aren't seventeen other confounding variables?" Which, of course, they're all legitimate questions, but at some point you've got to apply some judgment to these things. And what I've said, because I'm in lots of arguments today about e-cigarettes, and, to me, when I've gone to the e-cigarette enthusiasts—and I'm not talking about the industry people; I'm talking about people in the scientific community who are honest, legitimate

people, but who have an alternative viewpoint on this—and say, "Here's a whole bunch of facts we know about e-cigarettes, in terms of different classes of evidence across different systems; what explanation do you have that best explains everything taken together?" And to me it's like, these things are bad, okay? And they, "Well, but this study, there's something wrong here and there and here there." And it's like, "Well, yeah, I know all that, but give me an alternative explanation that will simultaneously help to explain all of the different classes of evidence, flawed though they may be, and if you can give me an alternative, other than these things are having bad effects on people, fine I'd like to hear it." And I've never gotten an answer to that question.

03-01:47:24 And so you're right. And, in fact, the Parmley paper, we weren't really coming at this from a Hill Criteria point of view; it was more like what is the full scope of evidence? And I think this is a place where the fact that I have an engineering background, I know math, I know economics a little bit, I've had a lab, I've done a lot of biological research, I've edited cardiology journals, I've lived in a clinical environment, and I'm kind of, I think, an unusual guy compared to most people, in having this tremendous breadth of opportunities to learn things, plus a commitment to try to pull everything together all at once. And in saying that, I'm not criticizing other people. I'm lucky, in a way, to have had that opportunity. But, again, if you get back to the economists and the consumer surplus thing, it's like, "Well, I'm an economist. I don't know about neuroscience." Well, learn it, [laughter] you know? You need to try to take the broadest possible perspective on these questions and pull all of this stuff together, because that gets you closest to what's actually going on, I think. But there's not a lot of people who can do that, you know.

03-01:48:54
Burnett: Yeah, yeah.

03-01:48:56
Glantz: Now, in the training programs that I've run, we really try to impart as much of that as possible to people, to try to get them to appreciate at least other disciplines, and how to talk to people in other disciplines. And that's also kind of the underlying idea of interdisciplinary or transdisciplinary or whatever they call it this week research, and there's actually empirical evidence that that kind of work leads to more insights faster than the people who take a very traditional disciplinary approach. And I actually was at some meeting at NIH where they were talking about this, and they actually have empirical evidence that these broader approaches move human understanding together faster than the narrow approaches that some people take. Now, you know, at the same time, having somebody who knows every possible thing about one thing is valuable, too.

03-01:50:04
Burnett: Yeah, you need speciation in order to have hybridity. Right.

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Glantz: Right, absolutely.

03-01:50:08
Burnett: But yeah, the question is what is the magic proportion, and I think they keep trying to design the right knowledge environment, and we're still working on that, it seems. [laughs]

03-01:50:20
Glantz: Yeah. I don't think there's one answer to that, but you need to have a system that accommodates the range. And at UCSF they've been pretty good about that. I'm in the National Academy of Medicine, and one of the things you get to do is nominate people for membership. And I've done that a few times, and the kind of people I put forward were these people who branch across several fields. And I have not succeeded in getting a single person elected, because what happens is the way the decision structure works is everybody gets shunted into specialty bins, and these people who I think have made hugely important contributions by working across fields, if you look narrowly within a field, none of them are like *the* guy, and so they've not made it. In fact, I was at a meeting of the Academy a few years ago where they were talking about this problem, and I said, "Yeah, it's a huge problem, to the point where I've just stopped nominating people because it seemed not worth the time." And they said, "Yeah, we know that's a problem," [laughter] but they haven't come up with a good solution.

03-01:51:49
Burnett: Well, we've talked a lot about—

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Glantz: I don't know if we're getting too far afield here.

03-01:51:53
Burnett: Not at all, not at all, and we can revisit things, too, as we go. But we have talked a lot about disciplines, interdisciplinary work, reckoning with different epistemological frameworks. You seem to really derive some satisfaction and stimulation from that kind of work. There's another dimension, though, and I'm wondering if you can talk a little bit about this kind of moral animus. What guides you? Is there a larger social framework that you've grown up in or been surrounded by that has helped anchor you in terms of how you orient yourself towards these problems?

03-01:52:41
Glantz: Well, yeah. You want to be a good person, and you want to do things that are good for society and stuff. In studying the history of science, which I've gotten interested in, there were some people who clearly went off the rails and did bad things. You don't want to be like that. I think part of it is kind of staying true to who you are and what you want to do and what you want to be. And it's like we were talking about the DOD SWOPSI report, and I mentioned to you I think that a lot of the faculty got really mad about what we did, but it

wasn't the conservatives, the people who said, "Well, I think America needs a strong defense against Communism, and I want to help." And I had much less trouble with those guys than the liberals who did not want to accept responsibility for what they did. And I think if they had said, "Yeah, I know that I'm helping the military do this, that, and the other thing, and I'm having a good time doing it, and I think these are important scientific questions, and phooey on you," that, to me, was a lot more defendable position than somebody who was denying reality.

03-01:54:16 And I think you need to be aware of what's going on around you, and how what you're doing fits into the larger picture, and if there's something you don't want to do, then you shouldn't do it. [laughter] I mean, I'm very big on personal responsibility, and that's why when we've done these papers looking at the tobacco industry, and the scientists they've funded and that, we name names. I mean, I think people should be personally responsible for what they do, and proud of it, and if they can't be, if they want to stay in the shadows, then that, to me, is slimy behavior. For example, there has been a campaign—we may get to this later—underway to try to force retractions of papers that we've written on heart disease and e-cigarettes, and also a retraction effort directed at a colleague of mine who was looking at COVID and e-cigarettes and kids. And these people, when they submit the demands to protect them from me retaliating against them, or the victim retaliating against them, which I've always thought was sort of ridiculous, it's anonymous. Well, but because at least the ones I'm familiar with were tied enough into the tobacco industry that their complaints ended up on right-wing websites, so the journal wouldn't tell us who it was, but we found it on the Reason Foundation's website. [The Reason Foundation has a history of taking tobacco industry money.] And, to me, if those guys aren't willing to come forward and say, "I think you're wrong, and I'm willing to stand behind what I'm saying and take responsibility for it," then they should keep their mouths shut. And I understand that these procedures were developed to try to protect people from retaliation, but these are senior enough people that they're big boys and big girls, and if they're not willing to take personal responsibility for what they're saying, then they shouldn't say it.

03-01:56:46 And if you go back and look at the attacks on the Parmley paper, which we now know, out of the industry documents, people were getting paid to do, they should have disclosed the fact that they were getting paid by tobacco companies to do it. And then if the publications said, "Okay, we're willing to let these paid shills do their thing in order to ventilate these ideas," then let them, and we'll have to deal with it. But I think people need to be willing to take responsibility for their actions, and if they don't then they should shut up. I feel very strongly about that. [laughter]

03-01:57:32
Burnett: Well, you're dealing with so much institutional, let's call it, mendacity or cynicism, and the tradition in science, going back to the seventeenth century,

was this notion of truth-telling being staked on your reputation as a person. I mean, it was also you had to be a gentleman and you had to have land and that kind of thing, [laughs] but there is this old notion that you have to put it on the line to say what's true, and that is a kind of moral, ethical standard that you espouse. Just to pivot and, I guess, finish up today—

03-01:58:23
Glantz: I could go forever. [laughter]

03-01:58:26
Burnett: Well, we just break it up into two-hour chunks. It's easier to manage. I was reading in *The Tobacco War* after the Prop 5 defeat to work on Prop 10, it said that you and Marsha became involved. Can you talk a little bit about Marsha, about how did you guys meet, and was she active also in this work?

03-01:58:54
Glantz: No. I don't know how she got—I don't know what I said about her being involved, other than putting up with me being involved, [laughter] because she has her own existence. What did I say in there about her being involved, other than—?

03-01:59:13
Burnett: I think it was a description, that you and Marsha met with Loveday immediately after the Prop 5 defeat and began to work on Prop 10. Maybe I misread it.

03-01:59:26
Glantz: No, yeah, you kind of misread it. What happened was we had Prop 5. Prop 10, it wasn't immediately after the Prop 5 loss. What happened there was I think we just happened to go out to—this was a year or so later. And after the thing ended, as I said, I was the one who gave the concession speech, because Paul and Peter and everybody else had been working on it a lot longer than I had; they were just too depressed. And people would say to us, "Well, when are you going to do it again?" And I remember saying, "Are you out of your mind? Do you know how much work it is to do this, especially when you don't have any money?" And that's why when people come to me now and say, "I'm going to run an initiative," it's like, do you really know what you're getting yourself into when you don't have enough money to just hire people to do it all for you? And really underestimating how hard it is.

03-02:00:30 But Paul, we just had dinner. He said, "Oh, let's get together for dinner." So the three of us [Paul, Marsha, and me] got together for dinner. So she was there having dinner with Paul, who was a friend, and Paul said, "Well, what do you think about trying again?" Because what had happened was there was a political consulting firm called Butcher Forde, which was run by Mr. Butcher and Mr. Forde, and they had run the campaign for Proposition 13, which was the property tax-cutting initiative. And they did something extremely innovative for the time, and that was they gathered most of the

signatures and raised most of the money through direct mail. And it was like they'd send the petition out and say, "Sign the petition, and if you want to cut your taxes send us some money." And they got a fifteen percent or something commission on this, and they made a fortune, and they passed Proposition 13, which, of course, has been an unmitigated disaster for California. And that was the election right before Proposition 5, so we were running Proposition 5 in this very anti-tax environment. That's a whole other story.

03-02:01:46 But Butcher Forde had done a bunch of polling and found that the ideas of protecting people from secondhand smoke was immensely popular, and so they went to Paul and said, "Look, if you just write an initiative to do this and sponsor it, hire us and we'll raise all the money, we'll run the campaign, we'll get all the signatures, blah, blah, blah, blah, blah." And so Paul said, "We want to do this. Are you willing to be a part of it?" And so that's what happened at that dinner, and I thought about it and said, "Yeah, sure," because I thought we'd lose again, but I thought it was worth it to just keep the issue out in front of the public.

03-02:02:35 Now, as things went along, Butcher Forde found it was a lot harder to raise money for a public health initiative than to get people to cut their own taxes, and ended up abandoning the campaign, and we were halfway through the signature gathering, and were kind of stuck. And the thing that actually saved us, I think, was *The Empire Strikes Back*, because what happened is that came out and there were these huge lines, and so we went out and collected signatures from people waiting in line for the movie. [laughter] But that's a great example of if something is too good to be true, it is too good to be true.

03-02:03:16 But she [Marsha Glantz] put up with all of this all these years. I mean, she's got her own—she back then was very involved in child abuse prevention stuff, and we had kids in schools, and—

03-02:03:35
Burnett: Lots going on.

03-02:03:36
Glantz: Lots going on. But no, she's never been an anti-smoking crazy person, although she's been totally supportive. And some of the stuff I've done over the years, especially around the Tobacco Documents—I mean, we were having process servers chasing us down an alley. And she certainly said, "Do it." And I think if I'd had a wife who was not so interested in social justice and do-gooderism—and she's a nurse—it would have been much harder to have done a lot of the stuff that I did, because I had a supportive family. And that's really important. So there's one other thing I wanted to talk about, or did you have something else on your list?

03-02:04:29
Burnett: Always, but go right ahead.

03-02:04:31

Glantz: Well, the other thing we haven't talked about—so we've talked about the kind of hard science stuff around secondhand smoke and that. Around the same time is when I started doing the policy research, too. And we talked about the idea of the tobacco industry as a disease vector, which, again, was a very radical idea at the time. And so a very important thing that happened in this period was I really actually started doing research on the tobacco industry as a disease vector, because unlike when you're talking about COVID or HIV or tuberculosis or pneumonia, the COVID coronavirus does not make campaign contributions and hire public relations people. And by then, I really was interested in the question of how do the tobacco companies shape the policy environment and the scientific environment. And in 1988 the voters passed Proposition 99, which increased the tobacco tax, created the State's antismoking program, and also created a research program, which was called the Tobacco-Related Disease Research Program [TRDRP], which is administered by UC [University of California Office of the President] on behalf of the State. It's open to anybody in California, but it's administered by UC.

03-02:06:10 Now, I get a lot of credit for that, and I deserve none, because I actually spent the year Prop 99 passed on sabbatical in Vermont writing a multivariate analysis textbook and doing some experiments with a former postdoc who was on the faculty there. But when the announcement for TRDRP's first funding cycle came out, I thought, you know, the fucking tobacco companies know a lot about me. They study me. I mean, we know that they had dossiers on me. We didn't have the Tobacco Documents yet but you just saw stuff popping up. There was certain rhetoric about me, like that I was a mechanical engineer, not a real doctor. And it's like, I really want to understand—and I knew from the work that I'd done through Americans—well, it was renamed from Californians to Americans. I, after many years of just sort of being ancillary to the campaigns, and being able to shoot my mouth off with no actual responsibility, when we created Californians for Nonsmokers' Rights, the other leaders made me the treasurer, which is the shittiest job in a struggling nonprofit, because you're the one who has to pay the bills and tell everybody no. And then later I became the president for a while, and I re-engineered it into Americans for Nonsmokers' Rights, and then did that for a few years, and then had enough being on a nonprofit board and left the board, although I'm still pals with those guys.

03-02:07:55 But I thought, you know, I'd seen enough up close and personal dealing with these guys [the tobacco companies and their associated organizations] to have some sense of what was going on, but I really thought, wouldn't it be interesting to study them in a formal academic kind of way, rather than just being in the field doing battle with them? And so I thought, I'm going to apply to TRDRP for a grant to study the tobacco industry as a disease vector. And I started to write the grant, and I looked at their [the TRDRP] call. It was all very traditional biomedical stuff, and I thought, they're never going to fund

this. It's a complete waste of time. [laughs] And a few days before the deadline I thought, you know, if anybody's going to tell me no, it shouldn't be me. I should at least apply, because if I apply I at least then have the right to complain if they don't fund it. But if I don't even apply then I can't complain. So I finished the grant up and sent it in and thought, they're never going to touch this.

03-02:09:09 So a few months later I'm in Perth, Australia, at the World Conference on Tobacco or Health, and this big, tall guy, a guy named Joe Cullen, who I'd never met before—he's a very famous guy; he had been the Deputy Director of the National Cancer Institute and is the one who got them into doing policy work, and really funded a lot of big projects, which laid the whole foundation for modern tobacco control. And this guy walks up to me, and he says, "Are you Stan Glantz?" And it's like, "Well, yeah." And he said, "Well, you put a grant in to TRDRP to study the tobacco industry as a disease vector." And I'm thinking, how the fuck does this guy know that? And I said, "Well, yeah, but I just did it, but there's not a snowball's chance in hell they're going to fund it." He said, "I think it's going to get funded." I said, "Why?" And he said, "Because I'm chairing the study session, and I assigned it to me, and I like it."

03-02:10:15 And that is really what got that whole line of work going. And so I was funded by TRDRP for a few years, and then built up enough of a bibliography in the legitimate scientific literature, as opposed to just policy briefs and things like that, that I was able to actually get the National Cancer Institute to fund it. And that grant was still going. A few years ago it got switched over to NIDA, the National Institute of Drug Abuse, but that grant is actually still going all these years later. When I retired, one of my co-PIs took it over. And that is all the work on the tobacco policymaking process, on detailed reports on about half the states of what happened there [available at https://tobacco.ucsf.edu/states and through the UC eScholarship initiative], continuing work looking at the epidemiology of smoking restrictions in reductions of disease, all the economic work that I was talking about earlier, and the beginnings of the document research that we did all grew out of that. And I think I was just damn lucky that Joe Cullen, he's a reasonable guy for them to chair the study section. He was a very senior guy. But it shows how people can help other people get things going.

03-02:11:44 And when I got the Tobacco Documents, which I'm sure we'll talk about more later, but I was scraping around for a little bit of money to start actually making them accessible to people working with the UCSF Library. I got a small supplement on top of that same grant that NCI had been funding the grant, CA 61021, and I remember saying to my program officer who got me it was like $50,000 or something to help get the documents going, I said, "Mark, what difference is this going to make? Why did you fund this little supplement that they can do if they think it's some particular opportunity?" And he said, "I don't know. Ask me in ten years, because it's going to take at least ten years to

figure out what this did, but I can tell you now it's going to be important." And he was right.

03-02:12:41 And that's why I tell fellows and students, if you have an idea you want to pursue, you should always try, even if you think you're going to fail, because you might not. So I wanted to make sure I got that story on the record. And the work on the Tea Party grew out of this that I was talking about earlier. The junk science paper grew out of this. It created a whole body of literature, and I can't claim to have done this singlehandedly, but it was a major thrust at opening this whole area of studying industry as a disease vector up. And now there's literature on commercial determinants of health. It's viewed as a legitimate area of work. And the tobacco work kind of laid the foundation for a whole lot of other stuff, looking at global warming, looking at the food industry, looking at the chemical industry, and others, and doing it beyond just the historical perspective, but really looking at—I attended a seminar by Zoom a couple days ago, looking at how the chemical industry was trying to shape research on reproductive arms of environmental chemicals. And just thinking about things where you're looking at the industry as an active player in trying to shape the scientific discourse, that's now at least accepted as an important question in a wide and growing range of research.

03-02:14:42
Burnett: And it sounds actually like science and technology studies, but less marginal, [laughs] right? It's more inside the edifice of what is considered legitimate scientific research. I think that set of shifts is very important, and we should begin the next session with that, talking about Prop 99, because there's other stuff that happens in there, not just the support of Joe Cullen but also reaction that we should talk about next time, and lay all that out, because it marks the beginning of a new era where there's formal support, financial support, for tobacco research, tobacco control research.

03-02:15:28
Glantz: Yeah, and I think that one of the things that happened, if you sit here looking back thirty years at TRDRP, in the beginning I wrote a lot of stuff really dumping on them, and saying they were too conservative, and they were just funding stuff that didn't quite score high enough for NIH, but over the years they really did broaden out. And I think their funding now—I haven't gotten money from them ever since those first couple of grants, the Parmley one and the one I was just talking about, but they've become much more adventurous and innovative, and, I think, doing much more cutting-edge stuff in this area than the NIH is. And they've become a way for people to get things going, and then—which is exactly what it did for me—build up enough of a portfolio and enough publications in the conventional literature to be able to have a reasonable chance of getting it funded through the NIH's much more conservative process.

03-02:16:41
Burnett: Right, right. Great. Well, let's continue talking about that next time.

03-02:16:44
Glantz: Okay.

Interview 4: July 12, 2021

04-00:00:13

Burnett: This is Paul Burnett, interviewing Dr. Stanton Glantz for the UCSF University History Series, and this is our fourth session, and it's July 12th, 2021, and we're here in San Francisco. So the last time we talked, you had introduced not only the passage of Prop 99, but also the important research fund that came out of that, and that created the TRDRP. You talked about applying for the grant to study the tobacco industry as a disease vector, and the way in which that was defended. And you did also talk about the ways in which the work at the local level was really important to scaling up tobacco control ordinances. So there were a number that you helped with, and we can talk about specific ones. What I'm interested in when I looked at the details of these stories, I came across these organizations that opposed these ordinances, that were supported or created by the tobacco industry. So before we go further, I'm wondering if we could talk a little bit about those phenomena. There was, for example, in '87 there was the Beverly Hills restaurant fight. So can you talk a little bit about what you knew about how the tobacco industry was reacting to these local ordinances?

04-00:02:19

Glantz: Right. Well, basically—and I think we talked about this last time, about the venue being important in terms of the outcome of a political fight—we had realized that we didn't have the resources to win at the state level. The state legislature by then was really dominated by tobacco interests and campaign contributions and lobbying, and very powerful alliances, like with the [California] Medical Association that they had developed. And the state initiative route also seemed closed because you just couldn't raise enough money to counter the gigantic campaigns against you that the tobacco industry was going to run, but we knew from the polling and sort of practical, on-the-ground experience that the public was on our side, and so we came up with the idea of doing local ordinances, and figuring that having a bunch of small fights we could win. We could muster enough resources to win at the local level by simply looking around for a community where there was a hopefully smart and committed politician, and a few local people who were willing to invest the time to build the kind of local support. And what we ended up doing was taking the 501(c)(4) [Proposition 10] campaign organization and just renaming it Californians for Nonsmokers' Rights as a political organization, to basically provide what today would be called technical assistance to local communities. I don't think it had a name back then, or if it did I certainly wasn't aware of it, because we were just kind of making all this up as we go along. But the idea was we knew what to expect from the industry. The arguments had become very baked in. And one of the problems that people had in fighting this was they didn't really just realize how dishonest and disingenuous and unethical the tobacco companies were, and so people tend to take their arguments seriously and get all balled up in this stuff, and then end up just sort of getting run into the ground. So what we could do was go into

communities and say, "Okay, we're not going to do this for you—you have to do it—but we can help you. We can tell you what to expect. We can tell you what the arguments are going to be, and what the answers are, and we can also hold your hand, because this is pretty scary." And that was just very successful.

04-00:05:19

Now, the tobacco companies' initial response to this was to just send in their lobbyists, but the whole political dynamic in a community, especially a smaller community, are really different than a place like [the State Legislature in] Sacramento. And one of the most interesting experiences I had was over at Sausalito, across the bridge. And I generally didn't go testify at these hearings, because our view was locals should do it, but people really twisted my arm, and I showed up to a debate in the Sausalito City Council, which went late into the night, and on and on. And the tobacco companies had sent down a guy named Clay Jackson, who at the time was one of the most powerful lobbyists in Sacramento. He was called the forty-first Senator, because he represented tobacco, oil, real estate, all the big financial interests in the state, and he was a really [physically] big guy. And I remember testifying in the State Legislature when he would show up on the other side, and all the Senators and Assemblymen would all sit up straighter when he came in. I mean, this was a guy with real power. And he would just say, "Well, I think that's a bad idea, blah, blah, blah," and it would just kill whatever it was. Very, very potent guy.

04-00:06:58

Well, they sent him to Sausalito, and so he gets up at the podium, and great, big guy, and he says, "My name's Clay Jackson, and I'm from Sacramento, and I'm here to speak against this ordinance." And the reaction of the City Council—because they had no idea who this guy was. I mean, up in Sacramento everybody knew who Clay Jackson was, but it's like, well, what are you doing here? I mean, do you own property here? Do you have business here? Do you have family here? No, no, no? Well, why are you even here? This is about Sausalito, you know. And they just paid no attention to the guy at all. It was just really fun to watch.

04-00:07:46

And so the tobacco companies figured out fairly quickly that that just wasn't going to work for them, that bringing in carpetbaggers from out of town really had very little impact, especially in these smaller communities, where the city council members or the county boards of supervisors, they knew the people there. And while all politicians like campaign contributions, having a bunch of your neighbors say "We really want this" is just a whole different thing than when you're sitting up in Sacramento or in Washington, DC, where the public is really much, much further away from what's going on. And so the tobacco companies went through several iterations of trying to generate a grassroots smokers' rights movement, to try to counter the grassroots nonsmokers' rights movement that we had inadvertently created. And it didn't really work very

well for them, because most smokers wish they didn't smoke, and by then the public awareness of secondhand smoke was getting big enough that a lot of smokers felt bad about smoking around other people. And, plus, smoking has become, or had by then, more and more a kind of lower-class thing, and so the kind of people who were still smoking were not intellectual, political sophisticates, by and large. And so they would show up at these hearings, when they could get them to show up, and yell at the—like in the Sausalito hearing, one of the people accused the City Council of being Communists, and threatened them, and got very angry, and that just doesn't work in that environment.

04-00:09:53

And so the tobacco companies, having gone through one phase of trying to actually organize the smokers, and realized that's not going to work, and so what they wanted to do then was try to co-opt their representation of them, but have the thing managed by public relations specialists. And there, they had a series of organizations that they created. The biggest one was called the National Smokers' Alliance, which was created by Burson-Marsteller, which is a gigantic PR firm, for Philip Morris. And they would show up and then have these people, the smokers, kind of there to wave around signs, but they didn't let them talk. And there were a whole series of those organizations. There was another one, which I don't remember the name of, which they built up in the Sierra Foothills, because there was a period where there was a lot of activity around Sacramento and the area east of Sacramento. And we kind of tracked down that one of the organizations—one of my students [Mike Traynor] was from that part of the state, and there was a lot of activity, and he went up and attended some of the public hearings, and I remember he got the business card for one of these so-called grassroots advocates on the other side, and then we cross-checked the phone number and the fax number and it was a public relations firm in Sacramento, even though she was representing herself as being just sort of a local yokel from whatever this little town, Placerville or someplace up there. [For details, see Traynor M.P., M. E. Begay, and S. A. Glantz. "New tobacco industry strategy to prevent local tobacco control." *JAMA* 270, no. 4. (July 28, 1993): 479–86. PMID: 8320788.]

04-00:11:44

Another thing that they did, which ended up being more successful in the long run, was they managed to co-opt the restaurant industry for the longest time. And in some places if they couldn't get the local restaurant association onboard, and they had a huge campaign to kind of give money to state and local restaurant associations, the National Restaurant Association. Herman Cain, who later ran for president as a Republican, was the head of the National Restaurant Association at the time and cut a lot of deals with Big Tobacco, and so the tobacco companies heavily propagandized the restaurants that they were all going to go broke if there were any restrictions put in on smoking, and then they would co-opt the leadership, and then all of the position papers and propaganda coming out of the restaurant associations were ghostwritten

by cigarette companies and the Tobacco Institute. And the restaurants, unlike these smokers, were a fairly sophisticated lobby. Restaurants are heavily regulated, often at the local level, so they're pretty good at dealing with local politics. And the tobacco companies use that, and, in fact, in some parts of the world are still using that connection as a way to sit in the shadows and try to fight ordinances and other policies.

04-00:13:31

Now, when they couldn't get the real restaurant association, they would then create their own, and the Beverly Hills Restaurant Association was the first example, I think, of that. And what happened, Beverly Hills, I think, was the first city in California to pass a hundred percent no smoking in restaurants rule. [For details, see Samuels B. and S. A. Glantz. "The politics of local tobacco control." *JAMA* 266, no. 15 (October 16, 1991):2110–7. PMID: 1920699.04 This paper is also foundational to Traynor et al, cited above.]

04-00:13:56

Burnett: And second in the nation, apparently.

04-00:13:59

Glantz: Okay, that I didn't—I know they were first in California. And the rule, or the local ordinance, in California local ordinances get voted on twice—this is true in a lot of places—where there's a first reading and a second reading, and then if they pass both readings then they go on to the mayor or whoever for signature. And in most political battles, the big fight is before the first reading, and most things, if they get passed the first reading, the second reading is kind of pro forma. Well, the original hundred percent no smoking in Beverly Hills ordinance was not very controversial at first reading, and it passed, and then between the first reading and the second reading the Beverly Hills Restaurant Association started yelling and screaming that this was going to destroy business; the restaurants were going to lose thirty percent of their business. There was a lot of noise raised about this.

04-00:15:06

And I remember talking to a friend of mine, a guy named Walt Bilofsky, who made a lot of money [in computer software, including early computer games]. He was an early computer game guy. And he lives up here now, but back then he lived down in southern California and was one of the local activists down there. And I called Walt up, and I said, "You know, this just doesn't smell right to me, because first of all Beverly Hills is rich. The richer the community, the less likely people are to smoke." At that point the smoking prevalence in California was probably around twenty, twenty-two percent. And in order for restaurants to lose thirty percent of their business, that meant a bunch of nonsmokers would have to not go out to eat because there was no smoking, which made no sense whatsoever. And I said, "You need to figure out what's going on here." But there was this kind of crescendo of complaints coming out of the restaurants led by this guy—I think his name was Rudy Cole—who was the head of the Beverly Hills Restaurant Association.

04-00:16:22

And then it turns out that it [the Beverly Hills Restaurant Association] didn't really exist—he's a PR guy—and it was a complete fabrication, and this thirty percent number, which has been spread around the world and comes up over and over and over everywhere, was just made up. But they were able to freak out the City Council, and when the passed the ordinance they rolled it back—or, no, wait, I'm sorry: the ordinance passed, even though there was all this yelling and screaming between the first and second reading, but the yelling and screaming continued. The Tobacco Institute, which was the tobacco industry's lobbying arm, was running ads in the national restaurant trade press saying there was this disaster in Beverly Hills, and after six months or so they rolled the ordinance back to fifty percent or something nonsmoking. I don't remember the exact number but at the time it was still the strictest law in California, even after being rolled back.

04-00:17:38

And it, interestingly, created a great research opportunity, because what we had, if you go forward a bit, there was a proposal to have an LA restaurant law, and I actually did go down to testify at that when the local people asked me to fly down to LA, and the LA City Council is in this huge sort of art deco kind of cathedral, and I went down with my "There's lots of poison chemicals in secondhand smoke, and secondhand smoke," and I had this big, five-foot-tall inflatable cigarette with a bunch of the chemicals on the side, which they made me deflate because the security people said it could be used as a weapon. [laughter] Anyway. And so it was going great, and then Wolfgang Puck, who's a famous restauranteur, shows up with his big, poofy chef hat on, and his white chef suit, and he walks up, and he says, "If this ordinance passes I will lose thirty percent." And that [snaps] killed it.

04-00:18:58

And I just knew that number, just intuitively, was just bullshit. So the hearing ended. I'm out in the lobby, outside of the City Council chambers, kind of stomping around muttering to myself, "This is bullshit." But I said, "If only we could get the data, and just see what actually happened in Beverly Hills and these other communities," which by then it wasn't the only one; there were ten or fifteen others by the time it came up in LA. And this woman, who I had never met before, was there representing the Lung Association, a woman named Lisa Smith. And she heard me kind of stomping around mumbling, and she said, "Well, actually, I know where you can get that information. The State Board of Equalization, the tax authorities, collect it by industry, by community, and release it. You can't get individual restaurants, but you can get the aggregate figures." And she went down to the Board and got the numbers for Beverly Hills and ten or fifteen other communities, and we ended up writing the first paper showing the effects of smoking restrictions on restaurant revenues, and basically they didn't have any effect. And, in particular, in Beverly Hills, where the sales just went up continuously, and during that period where the hundred percent rule was in effect, if the industry's claims were true there should have been a big drop in revenues,

because thirty percent is huge, and it just didn't have any effect. And that paper ended up having a huge impact on the debate, and there's a whole lot of other entertaining stuff around that paper [Glantz, S. A. and L. R. Smith. "The effect of ordinances requiring smoke-free restaurants on restaurant sales." *Am J Public Health* 84, no. 7 (July 1994):1081–5. doi: 10.2105/ajph.84.7.1081. Erratum in: *Am J Public Health* 86, no. 6 (June 1996):790. Erratum in: *Am J Public Health* 87, no. 10 (October 1997):1729–30. PMID: 8017529; PMCID: PMC1614757] if you want, but I'll let you ask your question. I just wanted to get the whole story out.

04-00:21:08

Burnett: I do want to know the interesting stuff to follow, but my question is about the power of the industry to declare this thirty percent number without question. So no one was able to ask, or there was never an opportunity to say, "Where does that thirty percent number come from?"

04-00:21:32

Glantz: Well, I mean, people would raise it, and say this number, they've never presented any objective data that it's true, blah, blah, blah, but they don't care. I mean, they have power. They have money. They have a huge PR operation. They have a big microphone. And it's the old Goebbels thing, that if you just say something enough times it becomes true. And it just drove me nuts in dealing with the people in the public health community, because they would say, "Well, maybe there was a little transient drop, but it went away." And it's like, "No!" there was no evidence of any adverse effect that's ever been published that I'm aware of. But the industry just pounded that into everybody's head, everywhere in the world. I mean, I remember being in Perth, Australia, at a time that these issues were being debated, and I think Perth is the furthest place in the world from San Francisco where you can be on dry land, not counting Antarctica. And the thirty percent claim was just flying around, and every place I've ever seen this debated all over the world—Western economies, Communist economies—it's all thirty percent. The industry just made the number up and just hammered on it.

04-00:23:10

Burnett: So it's propaganda. It circulates like a meme.

04-00:23:14

Glantz: Yeah. Oh, yeah, yeah.

04-00:23:14

Burnett: It becomes a sign independent of any underlying truth value.

04-00:23:18

Glantz: Yeah, and even when you started getting objective evidence—in that study that Lisa and I did, and then we did a couple more later of looking at bars, [Glantz, S. A. and L. R. Smith. "The effect of ordinances requiring smoke-free restaurants and bars on revenues: a follow-up." *Am J Public Health* 87, no. 10. (October 1997): 1687–93. doi: 10.2105/ajph.87.10.1687. Erratum in: *Am J*

Public Health 88, no. 7 (July 1998): 1122. PMID: 9357356; PMCID: PMC1381137] and I did one with someone else, looking at the claims of effects on the hotel industry [Glantz, S. A. and A. Charlesworth. "Tourism and hotel revenues before and after passage of smoke-free restaurant ordinances." *JAMA* 281, no. 20 (May 26, 1999): 1911–8. doi: 10.1001/jama.281.20.1911. PMID: 10349895], and the fact is you don't have to go to a restaurant to smoke, and you don't have to go to a bar to smoke. You go to a restaurant to eat. But it's just something they [the tobacco companies and their PR agencies] made up, and then the industry spent a lot of money advertising in the trade press to freak out the restaurant owners, the bar owners, and people just weren't hearing anything else, and it's just the power of propaganda.

[In 2002 I developed an educational campaign called Tobacco Scam designed to counter tobacco industry propaganda directed at restaurants and to expose the industry's cooptation of the state and national restaurant associations. It was called "Tobacco Scam" because it highlighted how the tobacco companies were scamming restaurants and bars into opposing smokefree laws based on bogus claims that such laws were bad for business and convincing them to install expensive ventilation systems that did not actually eliminate secondhand smoke. The campaign had two components: (1) a web site that presented the science of secondhand smoke, the actual evidence on economic impacts of smokefree laws on restaurants and bars, the undisclosed connections between the tobacco industry and the state and national restaurant associations and the purported ventilation experts who were promoting ventilation as the "solution" to secondhand smoke; and (2) paid advertising in the restaurant trade press featuring real opinion leaders in the restaurant and bar industries endorsing smokefree hospitality and exposing the tobacco industry. The effort stayed active until 2008, when I decided that we, combined with complementary efforts by Americans for Nonsmokers Rights, who had been showing up at hospitality trade association meetings and a former restaurant lobbyist who had been working his contacts. had largely succeeded in neutralizing the tobacco industry's cooptation of the restaurant associations and so stopped active development. The website stayed active until 2015, when it was inadvertently deleted through a chain of improbable accidents that ended up deleting the website and all backups. (. The website, which includes all the ads, is archived at: https://web.archive.org/web/20150220021001/http://www.tobaccoscam.ucsf.edu/. Archive copies after this copy are of SmokefreeMovies due to inadvertent deletion of the TobaccoScam website.]

04-00:24:15

Burnett: In our earlier session, we were talking about, on the one hand, your work is as a scientist, and you're interested in data, and you're interested in truth, scientific truth. Also, one of the things you're studying scientifically is the scientific distortion of truth, right?

04-00:24:46
Glantz: Yes.

04-00:24:46
Burnett: This expertise in how to manipulate public opinion, how to change narratives, and these [companies] are experts. These public relations firms have technical expertise in psychology and market research and sociology, and so on. So it's a cultural battle, because they're tapping into cultural norms, masculinity, identity, working-class identity at a certain point. I'm really captivated by something I saw on YouTube, and it was in '88, I think, when *The Morton Downey, Jr. Show*, which was really the early instance of this kind of right-wing manipulation of working-class identity, right?

04-00:25:47
Glantz: Right.

04-00:25:47
Burnett: And he was actually from a very rich family, but he had this idea of being loud, and being macho. And he had an episode on smoking, and smokers' rights. And you appeared on this show.

04-00:26:09
Glantz: Yeah.

04-00:26:09
Burnett: Can you tell me that story? How did that come about, and what was that like?

04-00:26:14
Glantz: Well, it was really interesting. I mean, you've characterized his persona very well. And that was a year I was on sabbatical at the University of Vermont, so it was 1988, '89. And I got a call from them saying he wanted to do a show on smoking. I think they taped it in New Jersey, right outside of New York City. And would I come on? And I said, "Yeah." And the reason I did was that his audience are the people who were smoking, and it would appeal to my pointy-headed intellectual friends to be on the [PBS] News Hour, but those people weren't the smokers. And I said, "If you want to get out in front of the smokers, I should go on there and just do my thing." And I actually came away with a fairly good opinion of Morton Downey, Jr., oddly enough, [laughter] because the producer said, "Well, what points do you want to make?" And I said, "Well"—I can't remember exactly what they were, but—"I'd like to make these three points." I said, "But he's not going to let me do that. He's just going to be screaming at me the whole time." And they said, "No. Now," they said, "you're taking your time, you're going to be on our show, and we appreciate it, and we will make sure you get to make those points." And they did. You know, they asked leading questions at the appropriate point, and when the cameras weren't on he was a reasonably nice guy, actually.

04-00:28:04

Now, that was one of my more famous TV appearances, because they had a guy—I think he was from [RJ] Reynolds [tobacco company]—next to me saying there was no evidence, and I just kept handing him books. I brought books of different studies. And he ended up throwing them up over his head. The clip is in *Merchants of Doubt*. He had said, "There's no evidence." And I said, "Oh, here's some evidence, and here's some more evidence, and here's some more evidence." [laughter] He got very frustrated. But the other thing is I said [to the producer when they invited me], "I just don't want Morton Downey, Jr. blowing smoke in my face," because he had a cigarette almost all the time. And during the show, at some point they actually lowered a cigarette down out of the fly space on a hook. So I don't remember what he said, but the cigarette comes down, and he very dramatically takes it off the hook and puts it in his mouth. I can't remember if he lit it or not. And he comes over, and we're sitting down, and kind of wired in the chair with all the microphone cables and stuff. And he's this fairly tall guy, at least compared to me sitting down, and he's looking down at me. I figured he'd do some—

04-00:29:30

Burnett: Theatrics?

04-00:29:30

Glantz: —theatrical trick like that, so I brought along a huge syringe [laughter] with a really big needle on it, and put it in my jacket pocket, and when he came over and he was leaning over me, and he's saying something about blowing smoke in my face, and I reached in and took out the syringe—it was about this long, big, big syringe with a really big needle—and pointed it at him, and I said, "You know, the only way to get that smoke into my body faster than you blowing it in my face is for me to inject it with a needle." And he went to commercial. [snaps] And my wife, who's a nurse, pointed out to me I was wrong, that actually inhaling it gets it circulating in your blood faster than a needle does. But afterwards, when the show's over, the producer comes up. "He loved that. That was just the best television." [laughter]

04-00:30:34

Burnett: So you had to understand the game—

04-00:30:38

Glantz: Oh, yeah.

04-00:30:38

Burnett: —in these cases, and there's a lot of theatrics in testimony before various state bodies. There's—

04-00:30:47

Glantz: Yeah, or Congress.

04-00:30:48
Burnett: Or Congress, and in court cases, and court dep—well, court depositions are more neutral, I suppose, but—

04-00:30:55
Glantz: Well, they're different.

04-00:30:56
Burnett: Yeah, they're different. But there's an element of rhetoric. There's persuasion, and there's this kind of—you're reinforcing this point that this is a cultural phenomenon, but there's a structured manipulation, cultural manipulation going on. But I'm glad you were able to tell that story. And so there are these organizations—

04-00:31:32
Glantz: Well, there's another tie-in, because later it turned out that Downey went on to the board of—the Beverly Hills Restaurant Association gig was so successful for the industry that they then created a national version of it so that they could just represent this as a bunch of restauranteurs, when, in fact, it wasn't. Or it may have been the National Smokers' Alliance; I can't remember now. But Downey went on the board of this national tobacco smokers' rights group, and he later developed lung cancer, and completely came over to the health side. And I remember him doing interviews where he just exposed the whole scam.

04-00:32:26
Burnett: That's interesting.

04-00:32:28
Glantz: You know, that this [smokers' rights movement] was represented as this grassroots community thing, and it was really just a PR exercise. And so he was talking about it from the inside later when he said, "Well, maybe I made a mistake with this stuff."

04-00:32:45
Burnett: That's interesting. I knew that he had spoken out against smoking later, and became not necessarily a huge advocate, but I didn't know that there was that element to it. So, yeah, that—I think he passed away in 2001 or something, six years after his diagnosis. And it was poignant because in that interview, one of the arguments, one of the classic arguments, he asks you, "How old are you?" And you said, "I'm 42," or something like that. And he said, "I'm 55 and I look so much better than you." [laughter] Just this argument that "I'm this paragon of health." But you're still here, and—

04-00:33:35
Glantz: Yeah, I'm seventy-five now. I outlived the guy.

04-00:33:39
Burnett: There's no glee in that, but—

04-00:33:41
Glantz: No.

04-00:33:41
Burnett: —it really underscores how deadly this public health threat is, and the ways in which, again, identity—I mean, talk about someone whose whole being was wrapped up in an identity, a persona, that involved smoking, almost like the paragon of that man who needed smoking to—

04-00:34:12
Glantz: Right, and that was one of the many marketing images and kind of marketing personas that the tobacco companies created. That was why, actually, when he flipped over and started talking about what he knew about how the industry operated, it was actually potent in some of the debates, because I think it was in New York City, there were actually three or four ordinances passed over time in New York City, becoming increasingly stringent, and I worked on a few of them, but Downey, I don't know if he showed up at the hearing but I remember him being at the very least quoted as saying that these arguments that were coming out of these phony restaurant associations were all just made up, and it was all a front for the tobacco industry, and he was sorry he'd ever gotten involved.

04-00:35:14
Burnett: Well, and the other side of it would be this economic side, Taxpayers United for Freedom, so this notion that "I should be liberated."

04-00:35:30
Glantz: Well, that was and remains another one of the industry's themes is freedom, and you should be free to smoke, and they invented the term "nanny state," which has been taken up by other corporate interests. And, in fact, years later, when we had the Tobacco Industry Documents, we actually wrote a paper called "To Quarterback from Behind the Scenes," which was a direct quote out of one of the industry documents. [Fallin, A., R. Grana, and S. A. Glantz. "'To Quarterback Behind the Scenes, Third-Party Efforts': The Tobacco Industry and the Tea Party." *Tob Control* 23, no. 4 (July 2014): 322–31. doi: 10.1136/tobaccocontrol-2012-050815. Epub February 8, 2013. PMID: 23396417; PMCID: PMC3740007.] And we were able to trace the origins of the modern Tea Party all the way back to the National Smokers Alliance and the American Smokers Alliance and Burson-Marsteller and I think it was Ray Klein & Associates was the name of another one of the PR firms that was active here in California. And you can just draw a direct line from these early attempts of the tobacco industry to create these phony grassroots movements. As that went on, and the Koch brothers had started I can't remember the name of it offhand but another organization [Citizens for a Sound Economy], and they kind of came together, and then that ultimately led to what became the Tea Party. And we published a paper about that actually called "To Quarterback from Behind the Scenes" that documented all of these connections, and how the tobacco industry had sort of used them to fight tax

policies, to fight—well, it started out fighting against clean indoor air, but then it was against taxation, against FDA regulation of tobacco, and other kind of restrictions. And it just showed that the creation of the Tea Party, which said it was a spontaneous grassroots uprising against Obamacare, was just baloney.

04-00:37:34

And I'll tell you, normally when we did a paper that I thought was going to be a little hot, I always warned the people at—by then I was being funded by the National Cancer Institute. I would say, "Hey, we have this paper coming out. Be aware." And that one, I forgot to tell them, and then a few days after the paper came out there was a budget hearing for the NIH. And the head of the NIH just got reamed out by these Republican congresspeople over that paper [at an Appropriations Committee hearing], and they forced an investigation of the NIH for funding it. I don't know if there was any investigation of me personally on that one, but it went on for months, and in the end the investigation said nobody did anything wrong, but, oh my goodness, it put a lot of pressure on the NIH. And they were strong in supporting [the research]. They said, "Look, this is good science." It was publishing peer-reviewed literature, it was written very carefully, and nobody can find anything wrong with it. They [the Republican congresspeople] just got mad.

04-00:38:57

Burnett: Well, I want to spend some time talking about that, because there's this working through the Californians for Nonsmokers' Rights. Is the acronym CANSR?

04-00:39:13

Glantz: No, it was CNR. I ultimately became the president of it, and we renamed it Americans for Nonsmokers' Rights, ANR. And I don't have any formal ties to them, other than that they're my friends, but they're still the premier group on this issue probably in the world, and they're based over in Berkeley. And the head of it is a woman named Cynthia Hallett now, and she's like the queen of grassroots activism on this issue. And it's interesting because there's always been a lot of tension between them and their approach and the kind of Sacramento- and Washington-based lobbyists, who are much more into backroom deals and playing things close to the vest, whereas the ANR types, and then it was CNR, they're like, "What do the people want?" And they tended to be much more aggressive in terms of what they were working to accomplish than these lobbyists were, because they're functioning in a totally different environment. And I think that the tensions between the grassroots people and the kind of lobbyist types have reduced over the years as they've gotten to appreciate each other more, but there were times when things were pretty raw between those different communities. I kind of moved back and forth in terms of who I was dealing with, but my biases are still very much toward community engagement and grassroots, and what do the people really want.

04-00:41:19

And this is stuff, in hindsight, that made a huge difference, but we never quite knew what we were doing. But the idea of building community support, and building from the ground up, that creates the foundation upon which you could build broader policies. And if you look at the places where things have failed, where some law got passed that was not a bad law but it didn't work, it's always been when you didn't spend enough time mobilizing community support. Because we got ahold of some of the industry's polling, and then, of course, when the Tobacco Documents became available we got a lot more of it. But the public, for the whole time I've been involved in this issue, the polling has shown very strong public support for clean indoor air, and the people's right to breathe air without breathing in secondhand smoke and all that. But it wasn't widely appreciated. And I remember seeing a poll—this was probably back in the early eighties—where they said, "Do you think people have a right to breathe smoke-free air?" And it was like eighty-five percent yes. And then they said, "How many people agree with you?" And it was like thirty percent. And so it was what today would be called a social norming exercise of making the public aware of the fact that actually there was a tremendous public consensus to do what it was we were trying to do. And the whole game for years and years and years, and still in parts of the world today, is to make that social consensus evident to everybody. Because once it is, things change.

04-00:43:18

And, again, we didn't know this at the time. We were just sort of dealing with it as best as we could, but looking back in hindsight the debates themselves would engage the public and let people realize that this consensus existed. Because the tobacco companies were very good and very aggressive at keeping stuff out of the media. They were a tremendously powerful advertiser, and they were very aggressive litigators, and they would make anybody who wrote anything they didn't like miserable. A lot of the advertising contracts with newspapers and magazines gave the industry advance warning of any stories they might not like so they could pull their advertising. And, in fact, I was invited to write an op-ed for *Newsweek*. It was when a decade rolled over, and it was called "The Nonsmokers' Decade," and it was about this big shift in social attitudes. And it got pulled at the last second because the tobacco companies said, "We'll just pull all of our advertising out of that issue of *Newsweek*." And I subscribed to *Newsweek* at the time, and I wasn't in it. And it's like, "Well, what happened?" And it's like, "Our editors just said we can't afford to lose X pages of advertising just to publish your little piece."

04-00:45:00

Well, that's all kind of optional stuff: features, op-eds, things like that. It's very hard to suppress hard news. And when you have a law being debated in the City Council or the County Board or even the State Legislature, that's hard news. And so the industry had a very hard time keeping that out of the media, but they would jump up and down and yell and scream and say it was all controversial and all this, that, and the other thing. But in that context, if it

was controversial it made it more interesting. And so all of their kind of PR tricks that they used to suppress features, when they did that, it boomeranged on them. And so what ended up happening in all these communities was there'd be these huge fights over a proposed law, and the industry successfully stopped a few of them, but for the most part these laws would pass, and they usually would pass with lopsided majorities, because as the issue became very visible and people started talking about it, a lot of people who felt very socially isolated, and saying, "Well, I think this is a good idea, but I don't want to say anything, because that would be too weird, and people would think I was like a nanny or something." But when they start realizing everybody else agrees with them, or almost everybody else agrees with them, all of a sudden this huge consensus arises, and then the politicians don't want to be on the losing side of the vote. And so many fights that I was involved in or watched or helped with, where it was like everybody's biting their fingernails, in the end you get a unanimous vote, or a near-unanimous vote.

04-00:46:59

And the metaphor I remember using a lot of discussions was like a whale. You're looking out at the ocean and there's nothing there, and then all of a sudden you see a whale, and they're pretty big. And so the whole thing is a matter of bringing that social consensus into visibility so it can become powerful.

04-00:47:19

Burnett: Right, right. Well, it's in this time, so going back to the early nineties, after Prop 99—I was going to say 29 again—

04-00:47:30

Glantz: Well, there was a Prop 29, too, later. [laughter]

04-00:47:31

Burnett: But so after it's passed, there's that twenty-five-cent tax, which I imagine was an alarm bell for the industry like no other, and the [California] Department of Health Services, they launch an immediate campaign under the auspices of education, and that's part of the education piece. And there's also the research funding the TRDRP. And you begin to work within that context, as well. And one of the things that is interesting—and you talked about identity and culture and your shining a light on the tobacco industry's practices of messaging for particular constituencies and communities—you are researching the targeting of specific groups, not just a question of a basic demographic, but you're looking at racialized populations, as well. Can you talk a little bit about that phenomenon? Is it because the tobacco industry understands that as education rises and as income rises you're getting less smoking, and so they start to target the more promising areas where people have less income and less access to resources?

04-00:49:02

Glantz: Right, right. Well, that's something that's called market segmentation, and the tobacco companies, they're really marketing pioneers. And a lot of modern marketing techniques that are widely applied were actually developed by the industry, because they figured out a very long time ago, in the 1910s, 1920s, very soon after the industry really got nationalized, that smoking was a socially-constructed phenomenon. And they were putting money into movies from the very beginning, because if they could get smoking into movies, it's a way to normalize it. In fact, I had a whole campaign [Smokefree Movies, later Smokefree Media], I'm sure we'll talk about later, to get smoking out of youth-rated movies. But one of the arguments you always hear is, "Well, everybody smoked in the twenties and the thirties." Well, in fact, if you look at per capita consumption, a few years ago when we looked at this, it was actually higher than in the twenties and the thirties. [https://smokefreemedia.ucsf.edu/news/sfm-ads/ad-94] And the reason everybody thinks everybody smoked in the twenties and the thirties was because it was in the movies, because they paid to put it there. They invented baseball cards, as a way to associate smoking with sport and athleticism. And, in fact, the most valuable baseball card, at least when I looked a few years ago, was a guy named Honus Wagner, who was a very famous pitcher, who demanded that the baseball cards be destroyed because they were packed in the cigarette packs, and he didn't smoke, and he didn't like it. So the Honus Wagner cards are very rare, [laughter] and that's why they're so expensive.

04-00:51:07

And the tobacco companies associated smoking with going to restaurants. Back once upon a time, smoking was just becoming popular, it was considered rude to smoke at a restaurant. So all of this stuff, if you jump ahead fifty years, well, people said, "Now everybody smokes in restaurants. You've got to have a cigarette after dinner. It destroys the experience not to do it." Well, what happened back in the twenties or thirties was there was a guy named Edward Bernays, who was the guy who invented modern public relations, and the tobacco companies were trying to make smoking more socially acceptable, and so Bernays went over to France and convinced some very famous French restauranteurs when they brought out their little silver dessert carts to put cigarettes on the dessert cart. And the reason smoking got associated with going out to eat was because of Bernays. And then they went to Europe, they got it popular in France, and then brought it back to America and spread it out.

04-00:52:28

And so this sort of social construction of the behavior is how they—they don't sell the cigarettes saying, "Here, smoke, get addicted to our product and will kill you twenty years early," or, "Get addicted to our product and pollute the air and make all the people around you miserable." It's, "Use our product and gain social standing among people you care about." One of the things that used to drive me nuts was like, how can the tobacco companies be out there selling their products with just wildly conflicting messages? Smoke to be

masculine. Smoke to be feminine. Smoke to be elegant. Smoke to be grungy. Smoke to be dainty. Smoke to be athletic. Smoke to be an individual. Smoke to fit in with the crowd. And these are all completely incompatible ideas. But what they figured out how to do was to channel these toward different markets by looking at what advertising channels they used, what radio and TV they did, when radio and TV came along, what publications they did. And as the people at the top of the market started rejecting smoking, the better-educated, better-off people, the lower classes became more and more and more important. And so they just said, "What do they care about?" And, "Let's make people feel that if they buy our product they're affiliating with our brand, they're affiliating with this set of images that we've developed, and that will get them addicted and keep them smoking." And so if you come to understand that, you need to understand these different messaging strategies that they use.

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Now, my main work was never in marketing—well, that's not true; I've done some work in marketing—but I was looking more at the kind of policy side. But these are tied together, because one of the other things that the tobacco companies did was they went out and they said, "Okay, we're going after Blacks. We're going after Hispanics. We're going after poor people. Where are the advocacy organizations that view those people as constituents? We're going to give them money." And so, for example, when people first started talking about increasing the cigarette tax as a public health measure, I don't remember the specific organizations but the organizations that cared about poor people originally supported that, because they said, "Oh, well, poor people smoke disproportionately. They're more price sensitive. Raising the tax, good idea, they'll quit smoking. People we care about will quit smoking and live longer, healthier lives." So the tobacco companies started giving money to these advocacy groups that cared about poor people, and all of a sudden cigarette taxes became regressive, and you're discriminating against poor people because you're increasing the tax. [Campbell, R. and E. D. Balbach. "Mobilising public opinion for the tobacco industry: the Consumer Tax Alliance and excise taxes." *Tob Control* 17, no. 5 (October 2008): 351–6. doi: 10.1136/tc.2008.025338. Epub August 7, 2008. PMID: 18687706; PMCID: PMC2772174.] They've given tons of money over the years to the American Civil Liberties Union.

04-00:56:04

The ACLU was an early opponent to all these clean indoor air laws, and it's like, there is no right to smoke. Why are you guys in there fighting us—going back into the seventies and the eighties—over smoking restrictions? Well, it turns out, we now know, they were getting a ton of money under the table from the tobacco companies. And then you have the more conservative, pro-business organizations that they've given money to, because they're pro-business, and they're anti-tax and anti-regulatory and things like that. So the industry, not only did they target these different ethnic groups but they

targeted the organizations who viewed them as constituents. They gave a lot of money to the Black media, to the Hispanic media, to keep them quiet. And today you can see it playing out in the battle over menthol. I mean, Al Sharpton, very famous Black politician, has a road show he runs for the cigarette companies where he and a half a dozen other well-regarded Black leaders fly around the country saying menthol bans are discriminatory, and that if you make menthol cigarettes illegal that that becomes one more excuse for police to harass Black people, even though none of these laws that people have passed, including here in San Francisco, prohibit owning a menthol cigarette; they prohibit selling them.

04-00:57:49

And this is all part of a very broad umbrella of never dealing with the actual issues. The actual reason that tobacco companies oppose all of these health policies, whether you're talking about clean indoor air or taxes or restrictions on marketing, getting smoking out of movies, the reason they're opposed to all of those things is because it reduces [the tobacco companies'] sales and profits. That's what their business is. That's what they care about. But that's never the argument. I've never in all the fights I've seen, here and around the world, seen a tobacco company saying, "We're against this law because we won't make as much money," but when you look in the Industry Documents, that's what they're concerned about. So they find all of these side issues. "Oh, if you do this, it'll hurt mom-and-pop grocery stores," or, "If you do this it will impinge on freedom."

04-00:58:55

Burnett: Yeah, regular people.

04-00:58:58

Glantz: Regular people. And, in fact, finally, a few years ago, some friends of mine in England wrote a really great paper called "The Policy Dystopia Model," [Ulucanlar S., G. J. Fooks, and A. B. Gilmore. "The Policy Dystopia Model: An Interpretive Analysis of Tobacco Industry Political Activity." *PLoS Med.* 13, no. 9 (September 20, 2016):e1002125. doi: 10.1371/journal.pmed.1002125. PMID: 27649386; PMCID: PMC5029800] where they went back—in fact, a lot of it is based on research we'd done over the years, where they went back—this is something I'd always planned to do and never got around to, so they went back and looked at a whole bunch of the papers we and other people who had started doing similar work, and sort of looked at the structure of the arguments that the industry was using, kind of stepped back one level of abstraction, and came up with this very nice formalism for assessing what the industry did, and they called it the Policy Dystopia Model. And translated into English, it means if you do something the sky will fall. And they never talk about how it's their sky that will fall; it will always hurt these other third parties. And it was developed in a context mostly of looking at tax fights and advertising restrictions, and it was done in developed countries, but we've looked at it in developing countries. It works there. And other people have now applied it to the sugar industry, and others.

And it's a sort of generic game plan that these rich industries use to protect their interests by pretending to care about somebody else.

04-01:00:36

Burnett: Right. Well, something that occurred to me that we haven't talked about is the economics of tobacco. Of course we have the whole time, but what I'm interested in is a snapshot of how this industry is different. We can talk about this later. Because the margins must be huge.

04-01:01:03

Glantz: Oh, yeah. Oh, yeah.

04-01:01:04

Burnett: I mean, the actual cost per unit of production of a pack of cigarettes—

04-01:01:08

Glantz: Oh, it's trivial. In fact, I think somebody once told me the most expensive thing in a pack of cigarettes is the cellophane wrapper.

04-01:01:16

Burnett: Yeah. And so a key to it is—well, we'll talk about this later, but it's a very large industry, and I hadn't realized this—I had assumed, because of everything that we're going to talk about [laughs] for the next several hours, is that the whole 1990s and 2000s were crippling to the industry. I had assumed that, because the scale of the decline in usage and the kind of settlement agreements and the money being drawn out of the industry, and they have expanded. They're selling *more*. They're doing more business, about two percent growth per year. And it brings home to me how much surplus capital is being generated, which then permits them to do all of this other kind of economic activity, to shift money around to these different constituencies, in order to maintain those markets and expand those markets.

04-01:02:38

Glantz: Yeah, although I think globally, aggregate tobacco sales are now dropping because of something called the [WHO] Framework Convention on Tobacco Control that we can talk about later. But basically the industry is selling a tremendously addictive product, and what they do, as the volume has gone down—because the per capita consumption has been dropping—they just raise prices. And, in fact, while the industry fights taxation tooth and nail—they really don't like cigarette taxes—the reason for that is because it just means they can't raise prices as fast. But what the industry will sometimes do when a tax goes in is they'll cut their wholesale prices for a while to buffer the effect, and then slowly bring them up.

04-01:03:44

Now, the tobacco companies like small tax increases, because what they seem to do if you have a small tax increase is they up the wholesale price concurrently with the tax, so it's exactly the opposite of what an economist would think they would do, because oh my God, the tax is raising the price.

But they would use that as a way to up the wholesale price, increase their profits, and have everybody get mad at the government. [laughter] But if the tax increase is big, then they tend to try to buffer it. So, for example, here in California a few years ago—in fact, it may have been Proposition 29—there was a tobacco tax initiative called—no, 29 I think they defeated and the one that passed was 56, I think, and it was like a two-dollar tax increase, which is huge. And so what the companies were doing was they were sending out coupons for two-for-one, or a two-dollar discount or something, and the idea was to buffer the shock of the tax, and let people kind of equilibrate to it, than start slowly raising wholesale prices again. But you're dealing with a substance that's so addictive that they can continue to generate huge profits, even on declining volume.

04-01:05:20

Burnett: That is interesting. I also hadn't thought about the tobacco industry increasing prices. I had assumed a huge incidence of that burden would have been just the taxation, but—

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Glantz: Well, they don't like taxes—there's no question about that—but in terms of impact on how the industry behaves and responds to the tax really depends on how big the tax is. And one of the complaints you hear about American business all the time is that they're all very shortsighted, and this quarter, and this quarter's profits, and tobacco companies are not like that. They are in it for the long term. And they're making business decisions, they're making political decisions, looking way down the road in order to maintain and expand their profitability. And they will sometimes absorb short-term losses for long-term profits, which is not what most—I've never heard anybody criticize them for just looking at this quarter. I mean, again, we talked about the Joe Tye paper [Tye, J.B., K. E. Warner, and S. A. Glantz. "Tobacco advertising and consumption: evidence of a causal relationship." *J Public Health Policy* 8, no. 4 (Winter 1987): 492–508. PMID: 3323236], where if you look at marketing as a current expenditure, which is what most businesses do, the tobaccos spent way more on marketing than is rationally justified, but if you look at it as a capital investment that's going to generate a long-term income stream then it makes total sense.

04-01:07:08

Burnett: It's a permanent income stream, as long as they're alive.

04-01:07:12

Glantz: Yeah, yeah, basically. Or maybe some of them will quit, but it's an income stream for decades.

04-01:07:21

Burnett: Right, right. And then we talked about this targeting of specific populations as there are economic shifts, and as more people at higher income groups quit, so the developed world becomes less of a market, or its market transforms. I

remember reading years and years ago, so it must have been shortly after this time, an article which argued that the tobacco industry was now eying developing countries, that as tobacco regulation goes up in developed nations they're seeking out these markets. Is that something that you're also seeing at this time?

04-01:08:08

Glantz: Oh, yeah, although the one thing that I have sort of a nuance that I think that argument is a little bit off, I think that the industry is just responding to globalization in general. And they have in no way abandoned the rich countries. It's just that as the poor countries have gotten richer, that's opened up new markets for them, and generally places where the level of political corruption is often higher, and it's easier for them to go in and get what they want, where civil society isn't nearly as well developed as it is in the richer countries in many cases, and so it's a much more fertile market for them in at least some ways, and they're trying to take advantage of that. So the people who say, well, the reason they're going into the poorer countries is because they're having such a hard time in the rich countries, I actually don't think is true. I think that they're going into these other countries because they just see more opportunities for profits.

04-01:09:30

Burnett: Okay. It's just part of the regular—all developed country corporations are moving into that space at that time.

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Glantz: Right, right. And this will be jumping way forward in time, but one of the global responses is something called the [WHO] Framework Convention on Tobacco Control, which I think was ratified—

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Burnett: Well, we'll talk about that later.

04-01:10:01

Glantz: Okay, but the interesting thing about that, by the way, is the whole idea for a global tobacco treaty actually came out of a professor at UCLA named Ruth Roemer, and it was a little bit like Prop 99, which I had been very skeptical would pass, and even if it did pass, that it would work. And I had thought that the idea of a global tobacco treaty was probably not a good idea, because, again, my experience from the grassroots work I had done was that the higher up you go in the political process, and the more distant you get from the people, the relative strength of these big corporate interests who can afford to fly people all over the place, and pay for long distance phone calls, and who had fax machines and stuff like that that normal people didn't have. You were just moving into a venue which is just more and more and more hard to reach and hostile.

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I turned out to be wrong on that, and we can talk about this in more detail later, and the research we did that led to these conclusions of being wrong, but the thing that was different, or the forces that led to me being wrong, there were two things that happened. The first thing is that civil society got its act together, and generated enough resources to help the poor countries out with the creation of an NGO called the Framework Convention Alliance, which was a coalition of health NGOs from all over the world [Mamudu, H. M. and S. A. Glantz. "Civil society and the negotiation of the Framework Convention on Tobacco Control." Glob Public Health 4, no. 2 (2009):150–68. doi: 10.1080/17441690802095355. PMID: 19333806; PMCID: PMC2664518]. And they helped raise the money, for example, to bring delegations from poor countries to the negotiating sessions. And then the other thing is that the awareness of the tobacco industry's bad behavior, and the targeting of poor countries, where there are still many countries where smoking is very low, especially among women, but even among men in some places. And they said, jeez, we want to keep that crap out of here. And then there was some very strong leadership at the World Health Organization, and it ended up working.

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And another reason, I think, it came out as well as it did—and we'll talk about this more later, too—is the Tobacco Documents, because before we had the Tobacco Documents all of these theories we had about evil behavior and manipulation and front groups and buying off people and corruption, all that other stuff, we would say, "Look, we've been doing this for ten years, or twenty years, and we know these guys. We've seen them up close and personal, and they are bad." And most policymakers and media would just say, "Yes, okay, sonny, that's very good. We have pills for that." But when you had the documents, where they're [tobacco company leaders and their agents and allies] speaking in their own words, it becomes very hard for people to ignore it. And really, the documents just completely changed the whole policy debate around these issues.

04-01:13:39

Burnett: Well, I do want to get that in—

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Glantz: So we're getting way ahead of ourselves here.

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Burnett: No, I want to get to that in this session, but I do want to return to the early nineties and—

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Glantz: Okay. Sorry about that.

04-01:13:50

Burnett: No, no, no, this is great. I wanted to tie it into a couple of things you said. One was the sensitivity of the industry to rapid increases in taxation. And the consequences for you and other researchers of the support of your work that targets industry as a disease vector. Those two things, the alarm bells go off for the industry with Prop 99, and the money is being used to expose the industry, to show how the industry operates, and saying, "This is bad for health." We're seeing a research project begin to coalesce around the study of the larger social determinants of health, including the industry itself. So there's the founding of the journal *Tobacco Control* in 1992. You're doing research in 1992 on tobacco research group marketing to African Americans and Latinos. So researchers are using these tax dollars to study the industry. How does the industry begin to react to these kinds of research efforts?

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Glantz: Well, they did everything they could do to shut them down. The creation of the journal *Tobacco Control* I think was very important, because up until then there was not a really good outlet to publish this kind of stuff, the kind of policy-oriented public health research on tobacco. And, I mean, you could get it in the *American Journal of Public Health*. Sometimes we could get stuff in there. I managed to publish things in *JAMA*, and other major journals. And then the more biological stuff we got into *Circulation Research*, those kind of journals. And I actually spent a lot of energy fighting with journals to get that stuff in front of their audiences, to say to the world these are important things that are a little bit different than what you're used to thinking about, but these are real ideas, and it's worth the trouble to get them into kind of the established venues. But at the same time, having a journal where this was the focus was a tremendous advance. And Ron Davis, he was a very important activist in this area when he was a medical resident, and he was part of the group that really took on the AMA's [American Medical Association] historic pro-tobacco positions. The AMA historically was terrible on the tobacco issue, going all the way back to the deal about Medicare and Medicaid, where the AMA was trying to stop it, and they cut a deal with the tobacco industry where tobacco would support the AMA in efforts to try to hobble what they called socialized medicine, and the AMA would help the tobacco industry fight federal regulation. And this was kind of—

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Burnett: Back to the sixties.

04-01:17:56

Glantz: Oh, yeah, probably before that. And there's a great book called *The Serpent on the Staff*, which has all about the history of the AMA, which has a whole chapter on this. And there were some individual physicians who were obviously not game with this, but Ron was one of several medical residents who really got involved with the AMA, got into the House of Delegates as a resident, and made a big fuss about it. And one of the things I've learned over the years about working with organized medicine is that the doctors are fine;

it's the sort of politician doctors who are cutting these backroom deals. And he was able to shift the AMA into a much less aggressively pro-tobacco position, and started even doing a little bit of anti-tobacco stuff. He went on and became the director of the CDC Office on Smoking and Health for a while, and then ended up at the Henry Ford Medical Center in Michigan, and from that perch came up with the idea of getting this journal going. And I wasn't a leader in that, but I was a helper, and I published a bunch of papers in that journal—in fact, that was a joke, that they never had an issue without one of our papers for a long time—even though it was a low-profile startup journal, just to try to help them build a reputation. And now it's very strong, and has a higher impact factor than the *American Journal of Public Health*, which is the leading general journal in the field.

04-01:19:48
Burnett: Really?

04-01:19:50
Glantz: Yeah. Oh, yeah. And there have been three editors. There was Ron, and then there was a guy named Simon Chapman from Australia who did it for many years, and now Ruth Malone, who's a retired professor from UCSF now. But she's been editor for about ten years. And it's become a hugely competitive journal to get into, actually. They've even had the temerity to reject a few of my papers, [laughter] although usually we can fight with them and get them in, but occasionally when they reject it we say, "Okay, we'll go somewhere else." But it was very important in terms of increasing the visibility and the legitimacy of the work.

04-01:20:34
Burnett: Yeah. Having a journal of record in the formation of disciplines—and this is an emerging sub-discipline—

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Glantz: Yeah. Oh, yeah. It's been a very important—there's another journal called *Nicotine and Tobacco Research*, which is published by the Society for Research on Nicotine and Tobacco, but it is much more kind of—although lately they've gotten into policy, but also it's been historically [sympathetic to industry positions, particularly industry framing of "harm reduction"]—in fact, today there's a huge fight going on about publishing industry research in there. *Tobacco Control* is the premier voice, no question.

04-01:21:17
Burnett: And Ronald Davis was a resident at UCSF?

04-01:21:21
Glantz: No, he was a resident I don't know where, somewhere back east.

04-01:21:25
Burnett: Okay. Yeah, I wanted to ask—this is, again, another digression, which I apologize for, but—

04-01:21:30
Glantz: That's okay.

04-01:21:30
Burnett: —the kind of larger research ecosystem, UCSF is a major emerging center for this kind of research; Michigan, because of Ronald Davis, in setting this up. Are there other major research clusters at universities around the world?

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Glantz: Well, today there are. I mean—

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Burnett: No, back then, though.

04-01:21:57
Glantz: Back then, no. No. There were people doing good work, but UCSF, when I created the Tobacco Center, we may have been the only one in the world. We certainly rapidly became the biggest one, and the most influential one. Now, today, there are others, and there were certainly people at other universities, and sometimes clusters of people who were doing a lot of good work beside here, but in terms of sort of an organized, focused effort, we very quickly became the biggest and the strongest, and probably still are, actually, although now there's more competition.

04-01:22:52
Burnett: Yeah. And so in other industrialized countries there would be a handful of researchers in the U.K. and Australia and Canada, and—

04-01:23:04
Glantz: Yeah.

04-01:23:04
Burnett: —that's just the English-speaking world, but no major center of research.

04-01:23:10
Glantz: Not like we have today. There were some people in Germany, Australia, like the Victoria Cancer Foundation in Australia was very strong. There were a cluster of really good people at San Diego, a bunch of people in Boston. But in terms of it being an organized program, with the kind of breadth and depth that we developed here, we were pretty much "it" for a long time.

04-01:23:49
Burnett: Yeah. I grew up in Canada, and I was smoking during those years, not a lot but enough to know what the price was, and the price was much higher. The taxation on cigarettes in Canada was—

04-01:24:07
Glantz: Oh, yeah.

04-01:24:07
Burnett: —higher by a factor of four. So you go south of the border, it would be five bucks in Canada for a pack—it's twenty-five cigarettes instead of twenty—and then you come back into the United States and it would be a dollar for twenty.

04-01:24:20
Glantz: Right. I mean, there are some good, important researchers in Canada, too, but Canada was way ahead of the United States in terms of policy development. And there was an organization up there called the Nonsmokers' Rights Association of Canada, and the Canadian Cancer Society—there were others, but those were the two key players. And they really got into some very strong, hardball politics up there, and got advertising banned, got big taxes increases through, and very aggressive advocacy advertising, buying full-page ads in the [Canadian] equivalent of the *New York Times* and the *Washington Post.* And they had some very strong leadership in their national government, and some of the provincial governments. So they weren't quite as fast with smoke-free, although the smoke-free stuff was being done mostly locally here. But in terms of national legislation, they still today are way ahead of the United States.

04-01:25:43
Burnett: Yeah, and there was a lot of—well, the fact that its [Canada's] socialized medicine means that the public bears nearly the full cost of the health effects of tobacco consumption, and that was always a thing that would be bandied around. I don't know what truth lies in it, but, "Why are cigarettes so much more in Canada?" And it's like, "Well, because we have to pay for everyone getting sick." [laughs]

04-01:26:15
Glantz: Well, that's true here, too; it's just a more diffuse payment system. But that argument has certainly been made. But I think it was more the sort of public health benefits in terms of improving people's lives. I mean, another place, the idea of graphic warning labels came out of Canada. I mean, the first place that really did it in a big way was Canada. And they weren't the first place to do plain packaging, but the idea was being pushed there very early. And, again, it was largely these two organizations with a few key people who were very strong leaders, and then the organizations that were willing to put the resources behind it.

04-01:27:06
Burnett: Right, right. So the importance of leadership is clear—

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Glantz: Oh, yeah.

04-01:27:12
Burnett: —in these stories. Can we talk about how the research work then becomes a target politically, and from the industry?

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Glantz: Sure.

04-01:27:25
Burnett: So Prop 99's passed. It's up for reauthorization. And in those years from 1989 to '93, there's a backlash, and there's pressure. Can you talk about how you experienced some of that in your work? [Note: Prop 99, which was passed by the voters, is permanent. The thing that came up periodically in the Legislature was the legislation authorizing the programs funded by Prop 99 and appropriating the money collected by the tax.]

04-01:27:46
Glantz: Sure. Well, the tobacco companies were very unhappy with the work we were doing. Going back, the Lisa Smith restaurant study, that gave them a really bad case of indigestion. And, in fact, years later, when we got the documents, they had a high-level meeting of their lobbyists, and they were talking about that paper, and they said that our claims of business disaster had just lost credibility because of that paper. So they're out there publicly trashing it, but privately they're saying, "Well, actually, he's right, because these claims of catastrophe for restaurants just never materialized." But they went after that paper very aggressively, and they actually set up a front group. I think it was called the 130/10 Club. And they were running ads attacking that paper.

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I had a researcher working for me named Anne Landman, who just got interested in this years later and went into the documents, and said, "Let's research what they've done to try to get you." And I was like, "Well, that seems kind of narcissistic to me. I don't know if I want to do that." And she said, "Well, I want to do it." So I said, "All right, all right." And [she found that] they [the tobacco companies] had a very high-level industry working group, at the level of senior vice presidents and general counsels and chief lobbyists and that, to shut down my work [Landman, A. and S. A. Glantz. "Tobacco industry efforts to undermine policy-relevant research." Am J Public Health 99, no. 1 (January 2009): 45–58. doi: 10.2105/AJPH.2007.130740. Epub November 13, 2008. PMID: 19008508; PMCID: PMC2600597]. And there was also another guy in Boston, a lawyer [law professor at Northeastern University] named Dick Daynard. They were interested in getting him, too. And they put a whole PR lobbying campaign together to defund me. By that time—and I can't remember the timing—there were two things that were going on: there was the effort to get the work defunded, which I actually think may have come a little later, and then there was an effort specifically to shut down my work on the economics. No, I got this story confused. The 130/10 Club was later.

04-01:30:06
The first thing that happened was they created I think it was called Californians for Scientific Integrity was what it was called, and this was a group that was attacking the Lisa Smith restaurant study, and claiming it was a

misuse of public funds to do flawed research. And so they actually sued the University over it, and I think that the guy they got to bring the case was a very famous conservative lawyer who ended up one of the two lawyers that worked on the gay marriage case. You remember there was a conservative and a liberal? It was the conservative guy. I'm blanking on his name right now [Theodore Olson]. But very powerful, prominent Republican lawyer. And they sued the University. They didn't sue me personally, but they sued the University to try to shut down the restaurant work. They claimed it was a misuse of taxpayer funds. They also attacked the *American Journal of Public Health*, which is who had published the paper, and he demanded the paper be retracted.

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And this went on for several months, and in the end the case was thrown out. They appealed it all the way up to the State Supreme Court and lost at every step. Having the University defending me was pretty good. The University, as an institution, played a very positive role through all of this time by just saying, "There's nothing wrong with this research. This is what we're here for. There's issues of academic freedom. And we'll defend this work." And not having to personally hire lawyers to do the defense made a huge difference. And there are people in other institutions where when the industry went after them just said, "Not our problem," and left them to just defend themselves. And, in fact, some of the early work linking the Joe Camel cartoon character, that R.J. Reynolds came up with, with smoking by kids—there was a guy Rick Richards back I think it was in South Carolina, where this university just said, "Well, go hire a lawyer," and he just stopped doing tobacco work, whereas John Pierce at UC San Diego, who had done another one of those papers, the University said, "We'll defend you." So it made a huge, huge difference.

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And so there was that part of it, and that was really the first time that I had come under direct personal attack, and they had a whole PR campaign running in parallel to the attack on the paper itself, on the lawsuit. And by the creation of this front group—which I think was called Californians for Scientific Integrity—the industry always tried to stay in the background. And then later, when they tried to get a rider put on the NIH appropriation to basically prohibit them from funding me—that was when the 130/10 Club came along. And the interesting thing was, as somebody who's not only been a researcher but been involved in direct social action through other organizations, if you're trying to get smoking restrictions passed or whatever, get a park renovated, what do you do? You're handing out flyers, and it's like, "If you want to get involved, call this number. Call this person. Email this guy." Normal for real grassroots action. The goal of everything is to get more people engaged. And when you look at the flyers that were being handed out by this 130/10 Club in their ads, there was never any "Here's how to get in touch with us." It was all done anonymously.

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And what ended up happening was they had, coupled with that, a quiet lobbying campaign to get a rider put on the NIH appropriation. It didn't say, "You can't fund Stan Glantz." My name wasn't in there. That's not how they do these things. It said something like, "No funds appropriated under this bill shall be used to fund dumpy professors in San Francisco working on tobacco," you know? [laughter] So while my name wasn't there, it really was. And, in fact, we just found out about this by just sheer dumb luck, because it happened that a woman who was working as a researcher [Heather Macdonald] for me at the time's sister was an intern with Nancy Pelosi—this is long before she was Speaker—who was on the Appropriations Subcommittee that dealt with the NIH budget. And I don't remember the woman's name, but she called up her sister and said, "I think this is your boss they're talking about here." And that's how we found out about it. And then there was a campaign that went on for about eight months to get that rider taken off, and finally it got removed in the Senate. And the American Cancer Society, a guy named John Seffrin, who was the CEO at the time, and the CEO for many, many years, he got interested in this and really went to bat, and took a lot of shit inside the Cancer Society for it, too. It's like, "Why are you defending this guy, Stan Glantz? He's weird. He's always criticizing us. This is all this sort of weird policy stuff, and we're trying to cure cancer."

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And what had happened was years earlier John had been assistant professor, I think, at Indiana University, and was in health education, and he actually launched the first newsletter on tobacco policy. It wasn't a journal; it was just a four-, eight-page newsletter. I never met the guy [at the time]. I just thought this was the greatest thing since sliced bread, because every few months we would get something that would tell people what's going on. This is before the internet and all of that. And he actually was having money trouble, keeping this thing going, which I somehow heard of, and I don't remember exactly what I did but I wrote a letter or did something to say, "No, this is really important. I support keeping this funded." And I'm an assistant professor. Who cares? But John really appreciated the fact that somebody out of nowhere was saying, "We think what you're doing is very, very important." And so that's how I first got connected up with him, and then years later here he is as the CEO of the American Cancer Society, and he said, "No, this stuff is important. We need to protect this." And through the ACS's work, and a bunch of other people, they managed to get the Senate to take out that rider.

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But another thing I learned in that incident—and I'm a chatty person, and I'm a very assertive guy, but sometimes you've just got to keep your mouth shut and let somebody else carry the fight. And I had figured that out for myself. I'd also been advised to behave like that. But it was tough. It was tough. And I've got to say, that's one where UC was not helpful. There were efforts, because UC has a lobbying presence in DC, and there was an effort made to get UC to

join the effort to get rid of that rider, and they just said, "We don't want to get involved." Which was too bad, but in the end the outcome was okay.

04-01:39:07

And then as we go forward in time we can talk about some other instances where the industry was doing its best under the waves to try to shut the work down. And they've certainly been very aggressive in going after me, but I'm not the only one. Other people who have done work which they find threatening, they'll try to shut down. And one of the real differences between them and these other—I mean, I've now seen it with other industries going after other people—is in academia and science, it's all about you're supposed to depersonalize things. It's the ideas, not the person, and whether he's a nice guy or a bad guy doesn't matter. It's are the ideas good, and you shouldn't worry about who's funding it, or any of this sort of extraneous stuff. And that is not how the tobacco companies look at things. They know that this guy is making trouble for them, and if they can shut up that guy, A, that problem goes away; and, B, other people will see what happened and just stay away.

04-01:40:32

Burnett: A chilling effect.

04-01:40:33

Glantz: Yeah. I mean, they are very, very, very aware of that, and people I know who work in the government—one of the real leaders in the development of the whole secondhand smoke case in the early years is a guy named Jim Repace, who was an atmospheric scientist at EPA. He was the one who got the federal EPA into the secondhand smoke issue. And he got dragged up in front of Congress a few times, and various kind of star chamber hearings [or private meetings]. His bosses got yelled at by powerful people in Congress. And that's tough.

04-01:41:21

Burnett: Absolutely.

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Glantz: And sometimes the institution will resist, and sometimes they don't.

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Burnett: Well, it sounded like indirect pressure was put on politicians at different levels—

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Glantz: Oh, yeah.

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Burnett: —who then exerted and started lobbying to get this work shut down. Can you talk about some of that, as well?

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Glantz: Yeah, well, another very important case was Willie Brown, who was the Speaker of the [California] Assembly, and a hugely powerful politician in California. And he was probably the most important tobacco industry ally in the country at the time, even more so than somebody like Senator Jesse Helms from North Carolina up in the US Senate, because we'd had Proposition 99 pass, and there were these ongoing battles over the money, and what it could be spent for, and stealing it, and things like that. And Brown was a key tobacco industry ally, and by then we were every few years just doing a very detailed report on kind of tobacco in California, what's going on. [These reports are available at https://escholarship.org/uc/ctcre_tcpmus.] And we kept saying, Willie Brown is getting just astronomical campaign contributions. I think the median contribution at the time was a couple thousands, and he was getting a hundred thousand dollars or something. I'd have to go back and look at the numbers. And Willie played a very key role in trying to divert the Prop 99 funds. And we kept writing these reports, just about campaign contributions, and what people were doing. And today, that's all pretty easy to get. There are national organizations that go out and collect the state data from all over the country, and there's one called Follow The Money, another one called Open Secrets, and you can just go on their websites and download this stuff now. They do it. And state laws vary in terms of quality, but it's not a big deal to get it now, but back when I started doing this, because of the Fair Political Practices Act, which I'd actually helped pass in a little way, we knew the data was available but you had to go up to Sacramento and photocopy it and tabulate it, and so we were publishing how much money all the politicians in the state were getting from the tobacco industry every few years. And Willie hated that.

04-01:44:11

And there was a reporter following him around, and doing a feature on him, and he had a meeting with Cornelius Hopper, who at the time was the Vice President for Health Affairs at UC, and apparently he confronted Hopper and said, "I want that bastard Stan Glantz shut down." And Hopper said no. He said, "We don't do that. We're the University of California. We believe in academic freedom." And Brown retaliated by basically shutting the entire research program down for several years, until there was a lawsuit that sprung the money. [This incident is documented in *Tobacco War*, page 208.] And I knew who Hopper was. I'd never met him. But years later I met him at some event, and I just said, "I just wanted to thank you for taking a principled position." And he said, "Now, I don't want you to take this the wrong way but we didn't do it because we like you personally. We did it because it was the right thing to do, and because we did not want to set a precedent where some powerful politician could start pushing the University around and telling them what they can and cannot do in terms of research." That was actually the correct position.

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Now, later there was this gigantic battle about tobacco-industry funded research, when Bob Dynes was president of the university, that did not go so well. And I think had there been different leadership at UC at the time, they may well have caved to Willie, or whoever was in that role. So for a lot of my career, I was very fortunate to have not a hundred percent institutional support in terms of fighting off these powerful forces, but it was pretty high, and in the few times when UC begged off, like they did in the fight over the rider in the NIH appropriation, some other powerful institution was there, defending me and the work. And I think that the reason for that—and I don't want to sound like an egomaniacal asshole—was because the work was very, very good. We were very, very careful. I mean, we were willing to take controversial positions and get out in front, which is what you're supposed to do, in my view, as a researcher, but we were always very careful that every I was dotted, every T was crossed, and we never went beyond what the data showed. And I think that kind of level of institutional support is what allowed me to do a lot of the things that I did, which made a big difference.

04-01:47:19

Burnett: Well, there was not just pressure from Willie Brown; there were others. And the argument that was being made by these politicians was that the research that you were doing into the industry was, quote, "politics," not research.

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Glantz: Yeah, right.

04-01:47:35

Burnett: But the research that you were doing showed the campaign contributions that were being made to the politicians who were making that claim. [laughs]

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Glantz: Right, exactly.

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Burnett: So it was also Governor Pete Wilson, apparently.

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Glantz: Oh, yeah. Well, he was totally in the industry's pocket. And, in fact, one of my postdocs—we actually later turned this into a full-page ad—or I don't know if we did; I can't remember who paid for the ad—but Pete Wilson had been a US Senator, and we found this—we called it the Buffy Memo, because the lobbyist's name was Buffy something, or her nickname was Buffy—where Pete Wilson had told her, "Look, I don't want you to be giving me money directly because California's a very antismoking place. [The ad appears on page 312 of *Tobacco War*.] Here's how I want you to give the money. Don't worry, I'll take care of you." Where they were, again, trying to move the money around so the connection to him wasn't so obvious. But, yeah, there was a kind of unholy alliance at that point between Pete Wilson, Willie

Brown, and the California Medical Association. And the CMA, their lobbyist at the time was a guy named Thompson who had been Willie Brown's chief of staff, and was viewed as a very, very powerful, probably the most powerful lobbyist at the time. And the kind of linchpin deal that cemented the relationship between tobacco and medicine was something called the Napkin Deal [described in *Tobacco War*, page 47-49], where there was a lot of activity—

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The litigation against the tobacco industry was cranking up. It hadn't yet reached the crescendo it did later in the state lawsuits, but it was cranking up. And so there was a deal cut at a very famous restaurant near the State Capitol called Frank Fat's. It's a Chinese restaurant where a lot of lobbyists—in fact, I ate there once. It's a nice place, kind of not too far from the Capitol. And it was a hangout for a lot of politicians and lobbyists. And so there was a meeting with Thompson, Willie Brown, his former boss, the key people from the CMA, the tobacco companies, and I think the [trial] lawyers. And they cut a deal where they would pass a law that would basically make it illegal to sue tobacco companies, in exchange for making it harder to bring malpractice suits against doctors, but do it in a way that protected the money that the lawyers would make. And the reason this was called the Napkin Deal was it was all written on a napkin at Frank Fat's. And, in fact—this is probably still true—when I went there for dinner years later, the napkin is framed and up on the wall. It's one of the most famous deals up in Sacramento. And it was something that got pushed through on a Saturday night, late in the session, without the usual kind of public hearings and public falderal, and it just [snaps] was done. And it for years insulated the tobacco industry from litigation.

04-01:51:11

Burnett: And what year was that, roughly?

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Glantz: You know, I can't remember, but if you look in *Tobacco War* it's in there. Just look up "Napkin Deal" in the index. [laughter] But it was probably around the late eighties, early nineties. [It was 1987.]

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Burnett: Okay. So even before Prop 99.

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Glantz: It was probably before or around the time Prop 99 passed, yeah.

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Burnett: Yeah. Because there were individual lawsuits. These weren't class action; they were individual lawsuits—

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Glantz: Right, right. Those go back to the fifties.

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Burnett: But they accelerate—you're right—in that late eighties period, I think—well, between '94 and '97 there were more individual lawsuits than in all the previous years back to World War II.

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Glantz: Right, right. Well, the first case actually had been brought here in San Francisco by a guy named Melvin Belli, who was called the King of Torts, but what happened—and, again, I don't remember the year, but the industry succeeded in beating back all of them, by just overwhelming—you'd have some lawyer, even a guy like Belli who was very wealthy and very good at what he did—they would just put in an infinite amount of money and just ground these guys down. And the first case where the plaintiff won was a woman named Rose Cipollone from New Jersey. And in the end the industry succeeded in reversing it on appeal, but that scared the shit out of them. And that's when they created the tort reform movement. In fact, we have a paper in press right now about the industry's early machinations around tort reform, and operating through the creation of front groups and that. But one of their key allies had become the medical associations, and they had several states where they cut deals with state medical societies, that you help us get protected and we'll protect you from malpractice. And, in fact, I was talking years later to the executive director or whatever he was called of the Nevada Medical Association, where they had refused to cut a deal with tobacco, and he said, "We never got malpractice reform through because we wouldn't work with the tobacco companies." But that was just too obnoxious, whereas here in California the CMA was quite in bed with them.

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And it was a little bit like what Ron Davis had had to have done at the national level, but the CMA ended up a key advocate for destroying the Proposition 99 antismoking campaign, the so-called Health Education Account. And it grew out of that alliance. And the first step for saving Prop 99—because there was a gigantic fight about that in the mid-nineties—was forcing the CMA away from tobacco, and I was very much in the middle of all that. We did that by going to the rank-and-file doctors, who knew nothing of these deals, and exposing what the CMA leadership had been doing. We ran a full-page ad in the *New York Times* about it. [The ad is on page 309 of *Tobacco* War.] And they were really pissed off.

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In fact, I remember the CMA had its annual meeting, and I had been invited to give a talk about some tobacco-related thing, and my talk at their state convention was the same day we ran this full-page ad in the *New York Times*, signed by, among others, former Surgeon General C. Everett Koop and a bunch of other luminaries—I got to sign it, too, but I was sort of in the pipsqueak part of the list—saying, "It's time for the CMA to get out of bed with the tobacco companies." And we named Steve Thompson by name, I

think. And they were so pissed. They knew I was one of the key people behind it, and they were really pissed at me.

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But what ended up happening in the end was the guy who had become the new president, a guy named Jack Lewin who came from Hawaii, who was much more health-oriented, he said, "Look, we just are on the wrong side of history on this." And the CMA, it wasn't until later that they started being a progressive force on the tobacco issue in California, but they kind of took their marbles and left, and it was only after we got the CMA after the way that we could go after Pete Wilson and Willie Brown, because the fact that the [California] Medical Society [Association] was supporting gutting the health education account, and diverting all the money to immunizing babies—and who's against immunizing babies? Why immunizing babies? Because that was a pet program of Willie's. And he was very proud of the fact that he'd gotten this money for immunizing babies years earlier. And so one of the things that the industry does—and we saw this over and over and over, looking at different states—is they would go to the leadership, the legislative or sometimes the governor, and say, "What are your favorite programs?" And they would pick one, and they'd try to get all the anti-tobacco money pushed over to that program. And what happened was the health groups for the most part were worried about attacking that diversion of funds, because, A, you're going up against very powerful politicians, and, B, how can you be against immunizing babies? Well, my answer was I'm not advocating throwing babies out in the snow. Let them go raid the Highway Trust Fund. We just want them to leave the tobacco program alone. And there was a huge battle that went on for a couple of years.

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And in the end, the American Heart Association, which had been kind of nowhere on this issue for years, they had a change in their leadership, and we published the paper Caroline Fichtenberg and I wrote, where we showed that the presence of the antismoking program was associated with a big drop in heart attacks [Fichtenberg, C. M. and S. A. Glantz. "Association of the California Tobacco Control Program with declines in cigarette consumption and mortality from heart disease." N Engl J Med. 343, no. 24 (December 14, 2000): 1772–7. doi: 10.1056/NEJM200012143432406. PMID: 11114317]. Because when people think about smoking, they mostly think about cancer, but the cancer risks evolve slowly. The heart attack risks change over a period of a few minutes, or they start changing within a few seconds, and get manifest much more quickly. And we had shown that the State's antismoking program had dramatically reduced heart disease deaths in California, and that convinced the head of the Heart Association that they should get into this. And so they allied—and I played a very important role in brokering this marriage—them and Americans for Nonsmokers' Rights, and just put on their claws and went after the Governor of the Medical Association and Willie. And it was a huge, bloody battle. It scared the shit out of the [California

division of the American] Cancer Society and the [California division of the American] Lung Association, who kept trying to distance themselves—that's the lobbyist term: distance themselves—from heart. And I remember talking to the Cancer Society lobbyist at the time, and she was very upset about—we were running full-page ads. The California Wellness Foundation put some money into it. And she said, "These guys, I go into legislators' offices and they scream at me. They think I'm with you guys." And I said, "Well, then why don't you just join with us? You're getting screamed at anyway. Why don't you just get with the program?" Well, they didn't do that, but it was sort of lead, follow, or get out of the way.

04-02:00:02

And in the end, we won. We got the program restored. And, interestingly, ever since then no politician has tried to touch a penny of that money. Even Arnold Schwarzenegger, who was a cigar-chomping free market Republican, who put an illegal smoking tent in the middle of the Capitol—because by then we passed Smoke-Free California, so you couldn't smoke in the Capitol, but there's actually a courtyard there, a completely enclosed courtyard, and he put a big tent up in that courtyard so he could go out there and smoke his cigars. But he put a carpet in the tent. I never saw the tent, but I heard about it. They put a carpet down in the tent. He was like some kind of prince or something. Well, what do you have in the middle of a completely enclosed courtyard? Every completely enclosed courtyard has it.

04-02:01:17

Burnett: Like a fountain or something?

04-02:01:18

Glantz: A drain. Right? When it rains. Well, this carpet covered the drain, and there was a big storm, and it flooded the State Capitol because of Arnold's smoking tent. Kind of wrecked some of the State Archives that were down in the basement. But he didn't touch the money, and I think it was because—and I don't think this; I know it, because I was later told by one of his chief lieutenants—that it just wasn't worth the fight, because these health groups were completely insane.

04-02:01:54

Burnett: [laughs] Well, yeah. I mean, it wasn't insignificant. I mean, the original it was like $100 million a year when it was coming in, and about $20 million of that was education and research, and research was a portion of that.

04-02:02:07

Glantz: Yeah, education was supposed to get twenty percent of the money, research five percent.

04-02:02:14

Burnett: Okay, but by the—

04-02:02:16
Glantz: And then another five percent for environment, and then the rest went to medical services.

04-02:02:22
Burnett: So by the end of the 1993-94 budget cycle, almost $200 million that voters had allocated to anti-tobacco education had gone into medical services.

04-02:02:33
Glantz: Right.

04-02:02:33
Burnett: So that's the degree of the diversion.

04-02:02:34
Glantz: Right, yeah, the diversion started out very small. It started out just nominal. And I was freaking out, because by then I'd come back from sabbatical, and just saying, "You can't do this. The voters voted that this was how the money was to be spent, and if you agree to these diversions then you're breaching the will of the voters and losing the moral high ground in the argument, and that's very important in terms of the public fight." Now, what the lobbyists said back to me—because I spent hours and hours and hours fighting with these—they're friends of mine, but we would argue and argue and argue. They said, "Look, I got you ninety-nine percent of the money." And they may well be right. "If we hadn't done this, it just would have never gone through in the first place." But what happened was by agreeing to that very small diversion, they gave up the principle, and so then it became a fight about, okay, how much can we take this time? And it kept growing and growing and growing. And then the word in, I think it was, '93 or '94, whenever we had this gigantic fight, was that they were coming in and just shutting everything down, that the [California] Medical Association and the tobacco industry and Wilson and Brown were just going to zero out the antismoking education stuff, or divert it all. They wouldn't zero it out; they would just give it all to the Child Health Disability Prevention Program, which was the immunization program. And then another key player in that was a group called the Western Center for Law and Poverty, which is a leftwing group that supported things like childhood immunization. And so that's an example of how the tobacco companies, they will go after whoever they need to get what they want.

04-02:04:45
Burnett: And this is what's known as the AB 816 fight.

04-02:04:49
Glantz: I think that was the bill, yeah.

04-02:04:50
Burnett: And the story around that is incredible, which we can go into later, but it's in the book *Tobacco War*, and it's detailed, for those who are interested. Between 1988 and 1994, the tobacco industry spent $23 million lobbying to ensure that

$300 million would not be spent on research and education, yielding an estimated 800 million in cigarette sales.

04-02:05:16

Glantz: Right. Now, we showed in the Fichtenberg paper, we both looked at what effect had the Prop 99 antismoking program had on heart disease deaths, but we also used the same kind of statistical model to estimate the effects on cigarette sales, and showed that the antismoking campaign had dramatically reduced cigarette sales. And then we were able to estimate the effect that the diversions had, too. And I don't remember the exact numbers, but I think the diversions over the period of time that we looked at in that paper had been like a billion and a half dollars in cigarette sales were made because of the reduced effectiveness in the antismoking program because of the budget cuts. So we've done, since then, much more sophisticated econometric modeling of the effect of the state antismoking program, and nationally, looking at similar calculations. And there's no question that it made a huge amount of economic sense for the tobacco companies to spend however much they needed to try to kill the program, because even the modest successes they had in getting funds diverted, until we stopped the diversions, the impact on sales and revenues was way bigger. Way bigger.

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And so another thing that I think our work contributed, when we were doing these economic analyses, was to just point out what the stakes for the tobacco companies were. And then you say to the health groups, and to individual—this is a point I always made in teaching was if you're getting into this area, they're going to be really mad at you, because every cigarette that isn't smoked is a little public health victory for us do-gooders, but if you're Philip Morris or Reynolds or BAT [British-American Tobacco] or Juul now, every little success we have is money out of their pockets, and they know it. And the stakes to them are tremendously high. And when you have an industry that kills half a million Americans and 100 million people or something worldwide, whatever the number is, they're not the nicest people in the world.

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Burnett: Well, perhaps we should leave that as the last word for today, and we'll start again next time.

04-02:08:15

Glantz: Okay.

Interview 5: July 19, 2021

05-00:00:12

Burnett: This is Paul Burnett, interviewing Dr. Stan Glantz for the UCSF University History Series, and this is our fifth session, and it's July 19, 2021, and we're here in San Francisco. And last time we talked, we were talking about some of the ways in which the tobacco industry was kind of activating a political backlash from powerful quarters. So I'm wondering if we could talk a little bit about—the way I understood it from the literature, and I think you can correct me here, is that you had had this research money from the Prop 99 research funds, a lot of which [money Prop 99 allocated to the Research Account and Health Education Account] had been, by the early nineties, diverted to medical services. And I think one of the things I read was a statement to the effect of, "Well, it didn't matter, because Glantz had gotten National Cancer Institute money, so he was okay." There's another twist to that. So can you talk to me about the fate of the National Cancer Institute money, or tell me about that grant, first of all, and what happened to that funding?

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Glantz: Sure. Well, those are kind of different topics, and one of the ideas for the State tobacco [research] program [the Tobacco Related Disease Research Program, TRDRP, run by the UC Office of the President and funded by the Prop 99 Research Account], and for a lot of the smaller research programs that were funded by foundations and things like that, is to help people get things going, and kind of establish an area enough that you can then go on and get NIH funding. The NIH is very cautious. I mean, they keep telling reviewers, study section peer reviewers, to promote innovation, and be adventurous, but I can tell you, having written lots of grants, and having served on, and even chaired, [NIH and other study section] review committees, it's very hard to get these review committees to cut applicants slack. And so they want to be absolutely sure something's going to work before they're willing to fund it. And NIH keeps trying to deal with that, and they've changed the way the peer review process works, and the way applications are written, and they give you [the reviewers who sit on study sections] little lectures about support innovation, but there is this tremendous bias in the process to focus on methodological minutiae and incremental change. And so it's very, very hard to get new things going through NIH, and I'm not telling you anything that NIH wouldn't tell you.

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And so when the research part of Prop 99 was started, which was called the Tobacco-Related Disease Research Program, I was actually very critical of it, because they really set it up, and it was just funding stuff NIH didn't have quite enough money to fund, and so it was just absorbing the same kind of basic conservatism. Now, I lucked out, because, as I think I explained to you, Joe Cullen, who was then the Deputy Director of NCI, and one of the real innovators at NCI in terms of public policy as a cancer prevention intervention, he chaired the committee [study section] that evaluated my

TRDRP grant, which essentially was studying the tobacco industry as a disease vector. And so that was what got me started with TRDRP, and what that allowed me to do was to get the research up and running, and to publish enough work—and I think we talked about this last time: I fought it into mainline, major journals—that it started to establish this kind of research as a legitimate enterprise that had the kind of publication record that would get you past an NIH peer review [study section] committee. And so the kind of natural progression is you have some smaller research organization will help get something innovative going, and then once it's kind of established, then you're positioned to go to NIH, where you can get larger grants for a longer duration.

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And so the application I made to NIH to continue this research on tobacco policymaking was just a natural progression. And I was lucky in that during that period there was kind of a growing interest at NIH—actually NCI—in policy interventions as a way to reduce tobacco consumption. Cullen, as the Deputy Director of NCI, had gotten two big community-based intervention programs off the ground—one was called COMMIT; one was called ASSIST—which were state-level policy interventions, and assessing their effectiveness. So the kind of openness to this kind of work was better by the time I went to applying [to NCI], and that grant continued for twenty, twenty-five years. I mean, it was still going when I retired, and it was taken over by one of my colleagues, who was a co-PI when I was the PI. Along the way in the last few years, it had moved from NCI over to the National Institute on Drug Abuse, but it was essentially the same work with cannabis policy added.

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Burnett: So there's a natural progression of vetting, a kind of conservatism on the part of the NIH, a new openness in the National Cancer Institute to looking at public policy interventions in smoking cessation and that kind of thing, or prevention, but there's something unnatural, I suppose, about increasing political scrutiny of federal funding, and there's an oversight committee of the NIH, for example. And I think [US President Ronald] Reagan made famous this kind of critique of the National Science Foundation, and he had that joke in the mid-seventies about millions of dollars being spent to conclude that rich people are happier than poor people, good-looking people are happier than ugly people. [laughs]

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Glantz: Yeah.

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Burnett: So there's a history of using federal research as a political football.

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Glantz: Oh, yeah, but the tobacco companies, they knew for a very, very, very long time, well before I came on the scene, that science was not their friend. Science was their friend internally, and we'll get to talking about this when we

get to talking about the documents. So the internal research that the companies did for product development was very high quality, and way ahead of what the general scientific community was doing, and they had figured out nicotine addiction twenty years before the mainstream scientific community did, and then used that for product design to maximize revenues and profits. So they were using science, but in terms of the external world, they wanted to restrain research, any kind of scientific research that might be dangerous to them, and that included research on cancer, research on heart disease. It included promoting kind of research pointing at other potential causes of tobacco-induced diseases, so they could say, "See, it's not our fault."

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And the area that they were most threatened by was this policy work, because what I was doing—and, really, I think I was the first and really legitimized this as an area of research, and there are many other people, not thousands of people, but there are other very strong groups continuing this kind of work now—was looking at the industry as a disease vector. And my one-liner, which at the time was viewed as kind of bizarre but now I've heard it out of the mouths of directors of the World Health Organization, and that is if you want to control malaria you need to understand mosquitoes. And the tobacco companies are the [disease] vectors, the carriers for cancer, for heart disease, for lung disease, low birth weight, because they, by promoting their products, are causing these diseases. And at the time that I started coming at it from that perspective, that was a very radical view in academia, even among the activists, even among the public health and antismoking people. At the time that I first got involved in the late seventies, the idea that smoking and tobacco was fundamentally a political problem and environmental problem, there were a few people thinking that way, but mostly it was conceived of as a medical problem: you had [individual] smokers who smoked, and they needed [individual] treatment—namely, smoking cessation—and the idea that there was a malevolent, intelligent force out there that was profiting from spreading these diseases [at a population level] was a really new idea.

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And it's the kind of thing, if you think about it, it's obvious, but it was just viewed as, well, this is politics. This [work] is journalism. What does this have to do with cancer and heart disease? And the tobacco companies worked very, very hard for years—and this is long before I came along—to kind of keep the NIH and other federal funding agencies away from this area. I mean, when you talk about smoking, the disease everybody thinks of is cancer, but more smokers are killed by heart and lung disease than cancer, and yet even to this day the National Heart, Lung, and Blood Institute doesn't have that much work going in tobacco. They have some now, which is good, but for years the director of the NHLBI was a guy named Claude Lenfant, who I remember reading a statement where somebody said, "Well, why aren't you doing more on tobacco?" And it was like, look at the Appropriations Subcommittee, and there were powerful Members of Congress and Senators who just, he felt,

would be jeopardizing the funding for their other activities. And this idea of raising the risk and the cost of doing anything that might be outside the interests of the tobacco industry, that's been a major strategy of theirs, going back at least to the 1950s.

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And I think we talked about journalists, and if a journalist—they're kind of like professors: it's like, publish or perish. They're judged on their productivity. And I had many journalists who covered tobacco, saying that if you do a tobacco story you're less productive, because in addition to properly vetting the story, which you should always do, they knew that there would be a letter coming in from the CEO of some tobacco company complaining, or lawyers complaining, and then in addition to defending the work before publication, there would always have to be this rearguard issue, and so they were just less productive. And I spent thirty-four years on the California State Scientific Review Panel on toxic air contaminants, and I was arguing to the California Air Resources Board that we should look at secondhand smoke as a toxic air contaminant—if you look at the legal definition of a toxic air contaminant secondhand smoke clearly meets the definition, and it's more toxic than a lot of the other stuff we were looking at, with wider exposures. And in the end they did actually two reports on secondhand smoke that were very cutting edge, but it took a long time because the management said, "Look, we know if we do this the tobacco companies are going to make our lives miserable. They'll probably sue us, and we'll have to take limited legal resources to defend the report, and it's just not worth the trouble.

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Now, in the end they did it, and, in fact, the industry didn't sue, but this sort of hunkering down and looking mean is an established part of their strategy that they use across the board. They use it to scare jurisdictions off legislating, regulatory bodies off regulating, and they go after scientists and funding agencies. And if you go into the industry documents, you can find lots of discussions about, "Well, we're worried that this organization's going to start funding work we don't like, and what can we do to scare them off?"

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Burnett: And so this kind of activity had been going on for so long that it had created in each of these institutions that might have oversight or might have something to say or write about tobacco, had created these cultures of self-censorship?

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Glantz: Yeah. Now, there were exceptions to that, obviously, which I benefitted from, because there were a couple of key people at NCI who thought, no, this is important work, and I was lucky in that there were people on the peer review committees—because the NIH is designed to try to depoliticize funding decisions by having these independent peer review committees. And I was lucky in that there were a couple of people on the committee who were open

to these ideas, and that's how it got going. But there was definitely a cost to them [NCI]. I mean, there were a couple of times that Congress went after NCI for funding my work, beat up the NCI, demanded Investigator General investigations of funding decisions of my work, not only my work, me personally, but also looking at the internal processes at the agency about why did they make the decision to use taxpayer funds for this kind of work. And I was lucky in that there were people, kind of faceless bureaucrats, inside the government who thought this was important work, and worked to defend it.

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But there's this whole kind of superstructure that had built up, that sort of made it possible. I went forward with what I thought were good and innovative ideas, and defended them well, and all that other stuff, but there has to be a receptor at the other end that's willing to consider it. And there's no question but the tobacco companies tried to make it difficult for the people in the government to do this. The same thing happened at other agencies. I mean, Jim Repace, who was a good friend of mine, who was the guy who got a lot of the secondhand smoke work going at the EPA, I mean, he got hauled into Congressman Bliley's office, who was called "the Congressman from Philip Morris," from Richmond, Virginia, and his [Repace's] agency [the EPA] got beaten up, and in the end sort of caved to the [pressure]. The EPA ended up putting out its landmark study in around 1991, identifying secondhand smoke as a class A carcinogen, a human carcinogen, which had huge political ramifications [Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders, US Environmental Protection Agency, EPA/600/6-90/006F, December 1992], but after that, that was it, rather than following up on that work, because of all the political pressure that was brought to bear, they stopped doing it. So the industry—

05-00:19:32

Burnett: That was the EPA, the Environmental Protection Agency—

05-00:19:35

Glantz: The federal US Environmental Protection, yeah. And, in fact, years and years and years later, I was on a panel [making a public presentation]—this is maybe five years ago—with the guy who had been the head of the EPA at the time, whose name I'm blanking on [William K. Reilly]. But afterwards we went out to dinner—I never met the guy before, but we went out to dinner with a couple other people who'd been on this panel. The panel was on external pressures on science. It was done in the context of the controversy about the NFL trying to cover up concussion injuries, because they used a lot of the same tricks the tobacco companies use. And he told me that H. R. Haldeman, who was Nixon's chief of staff at the time, called him up and yelled at him about why were they doing this report on secondhand smoke, and really turned the screws down to try to stop it, but this guy [Reilly] just said it was obviously the right thing to do, and he stood up to him and said, "Do you really want it to come out that the administration is putting political pressure on, on behalf of the tobacco industry?" And Haldeman backed off, at

least according—so these sort of high-level interventions to try to stop research they don't like is nothing, and it's still going on to this day.

05-00:21:07
Burnett: Oh, it's nothing new, it's just been going on—

05-00:21:09
Glantz: It's nothing new, and it's not stopped. I mean, they try to dissuade people, individual researchers. They go after them. And I've been gone after multiple times. But it's just not me. If you talk to John Pierce, who's now retired from UC San Diego, they went after him several times, and people at other institutions. I think the attacks on me, from what we know from looking in the industry documents, were higher-level, and more intensively resourced, to try to shut the work down, than some of these other people. [Some of these efforts are detailed in Landman, A. and S. A. Glantz. "Tobacco industry efforts to undermine policy-relevant research." *Am J Public Health* 99, no. 1 (January 2009): 45–58. Doi: 10.2105/AJPH.2007.130740. Epub November 13, 2008. PMID: 19008508; PMCID: PMC2600597.] But that may just be because we looked, you know what I mean? There may have been equally aggressive campaigns, like Patricia Buffler, who was a professor at Berkeley, and went on to become dean of the Public Health School, was involved in the first big national US longitudinal study of secondhand smoke and lung cancer, which was run by a woman named Elizabeth Fontham, who was then an assistant professor at Louisiana State University, went on later to become the dean of their Public Health School. It was a big multi-center epidemiological study, and they went after every single institution that participated, to try to shut them down, to get them to pull out, to try to get them to break the confidentiality of the respondents' data. Fontham, who, as I said, then was just a young assistant professor, showed me pictures of people putting hate mail in her mailbox and swastikas and things. And I think I talked about this last time: in science you're taught to depersonalize things, and it's not about the people, it's about the ideas, but the tobacco companies, and some of these other big industries, they know that it's people who make problems for them, and if they can stop those people then they'd make the problem go away. And so these very aggressive attacks, often run through third parties and intermediaries so the industry can kind of try to hide their role. It's just part of the cost of doing business [both for the tobacco (and other) companies and research doing the work the companies want to stop].

05-00:23:59
Burnett: So I was about to ask you about the nature of political pressure. So just giving concrete examples, like when a congressman calls up, what do they threaten? That's one. And then the second is you're revealing that this is kind of work by hired goons. Like, this is borderline criminal behavior. This is dramatized in [the film] *The Insider*, where Jeffrey Wigand claims that his family was threatened, and he was getting phone calls, and there were bullets in the mailbox, that kind of stuff. So has that kind of stuff happened to you? Have you had threats of harm?

05-00:24:53
Glantz: I've never had—well, let me think. Yeah, I've had a few.

05-00:24:57
Burnett: Like what? What happened?

05-00:24:58
Glantz: Just emails and phone calls, and—I mean, for a while—this is a long time ago—the UCSF Police was x-raying packages that were coming to me for a while. I don't remember what led us to do that, but there was concern about that. One of the funnier stories—and we'll talk about *Death in the West*, which was a documentary made in England about the image of the Marlboro cowboy, which contrasted Marlboro ads with interviews with real cowboys dying of smoking-induced diseases and their doctors, and there were two interviews with high-level Philip Morris executives, which was the first and last time they ever agreed to do that. Very powerful film. It was aired once on Channel 4 in England, one of the private stations. And then Philip Morris found out *60 Minutes* was thinking of airing a cut down version of it, and they went to court in England and sued to suppress the film. And Thames Television, who made it—it was Thames Television on Channel 4—caved, and agreed to suppress the film, and all copies of the film, and all the reporters' outtakes and notes, and not even willing to admit they ever made it, which was kind of ridiculous, since it had been aired once. And a copy made its way into my hands, and I did quite a lot of research, trying to verify its bona fides. We actually tracked down the cowboys, or, in one case, the widow of one of the cowboys. And mostly I was going down the street and using a payphone for the calls, because we were worried about the phones being tapped, and my phone here [at home] started making clicking noises. So I contacted the UCSF police, and they got somebody from the Lawrence Livermore Lab, a security guy, to come out and sweep my house.

05-00:27:26
And it was interesting because he told me first of all, by then, digital switching was just coming in, and he said, "If they were going to tap your phone, they wouldn't do it like in the movies, where they come in and attach wires. They would pay somebody off at the switching center and just divert the digital signal to two places." Because it was digital, there was no signal quality degradation, and so it's very hard to detect. But they looked through the house and they found the problem had been a mouse chewing on the phone wires, [laughter] so he said, "You weren't bugged; you were moused."

05-00:28:05
But no, these guys, they're not nice people. I mean, if you make a product that kills half a million Americans every year, and I don't know how many internationally, people like that are not what you would call ethically pristine people. And they're in there to protect their interests, and they'll do what they need to do to protect their interests. So one of the things I always tell—or told, since I'm retired now—the students I had was you can do a lot of really good

work in this area and make a big difference, but it isn't easy, and you just need to steel yourself to be ready for the attacks, because they'll come. It's just part of the cost of doing business, and the industry's hope is if they make people miserable enough then people will stop. And they succeed. I mean, I know people who just said, "This just isn't worth it."

05-00:29:09

I mean, if you look at the research around e-cigarettes now, and the industry's invested huge efforts in stirring up controversy around that, I know not just here at UCSF but from talking to people around the country and around the world, there are postdocs and graduate students who just don't want to work in this area because they just think it's too risky. They're just trying to get their careers going, and if they're going to deal with attacks and having your reputation smeared, it's just not worth it. And that's kind of the core strategy that these companies use, to academics, to journalists, to politicians, to anybody who might be doing work that they think threatens their profits, they just try to figure out, what can we do to "take them out?"

05-00:30:09

Burnett: And it doesn't need to be cloak and dagger; it can just be exhausting.

05-00:30:14

Glantz: Yeah.

05-00:30:14

Burnett: So you've talked about—

05-00:30:15

Glantz: Yeah, it's basically a war of attrition.

05-00:30:18

Burnett: Right. Right. So in the—

05-00:30:22

Glantz: I don't want to be a total downer here, because the thing is if you can get past that, you can have a gigantic effect. I don't want to sound like an egomaniacal asshole, but the world's a different place because of the work we've done, and it's a different place very much for the good, and you can take a lot of satisfaction in that. But it's not easy. And some of the research we've done—I think we talked about some of it last time, where we look not only at the industry's activities but the effects of these policies, not only in terms of reducing smoking and tobacco use, and improving health and cutting heart attacks and cancer and these other things, but also looking at the impact of these policies on industry sales, because it's important to really appreciate that the stakes in this financially for these companies are very, very [high]—it's in the billions and tens of billions of dollars. And so if you were them, and you're interested in profit maximization, if there's something in there which is threatening your [company's] ability to generate revenues, it's just rational to want to stomp it out.

05-00:31:51
Burnett: The sales are going to reach a trillion dollars annually in a couple of years. It's around like 950 right now.

05-00:31:59
Glantz: Yeah, but if you look globally, actually global tobacco sales have peaked and are coming down now. So it's a tough fight, but—I mean, when I got involved in this issue back in the late seventies, the kind of consensus among people who were public health people who were viewed as smart and aggressive was that you could never get smoking prevalence below twenty percent. Because of the addictive nature of nicotine, and the aggressive marketing of the industry [and their political power], that was kind of the floor. And in California it's something like ten or eleven percent now, and among the smokers, most of those people, they're light smokers, and a lot of them aren't even smoking every day. So the current reality that we have here in California and a few other places around the world would have been just viewed as unthinkable twenty years ago. So when you look at that, then you project it out to the reduction in heart attacks, the reduction in strokes, over a little bit longer term the reduction in cancer and lung disease and things like that, it's a stunning public health achievement. And I think that the kind of research that we've done, it's certainly not the only thing going on, but it's made a substantial contribution to both understanding the biology of what's going on, and then understanding the industry as a disease vector, and the agencies that they operate through. And when you understand that, you can start to develop strategies to block and counter what they're doing.

05-00:33:56
It's no different than dealing with some biological process, where you look at—like I have chronic lymphocytic leukemia, okay, and there's a drug now where they've identified a specific enzyme which is involved in the creation of the bad white cells, and there's a drug that blocks that enzyme. And so by being able to understand what the chokepoints in the biology are, that tells you where to intervene, and the same thing is true when you talk about this in the policy space. If you know who are they giving money to, what organizations are they funding and using as third parties, or what front groups have they created, by bringing that out, you make it much harder for them to operate, and they know that, and they don't like it, [laughter] and they try to stop it.

05-00:35:02
Burnett: Right. And so there's a combination of things. One is the industry using the transparency of science and public information against this research, so—

05-00:35:14
Glantz: Right.

05-00:35:14
Burnett: —lots of Freedom of Information Requests to figure out how that can be exploited in the public sphere. You can make fun of this or that small piece of research, or you can distort it.

05-00:35:28

Glantz: Yeah. The other thing they do—I've had to deal with Freedom of Information; every email I ever sent to a government employee I figured don't put something in there you don't want the tobacco companies to read, because they're going to FOIA it—but the industry also—and we wrote a paper, too, about this—what they would do was when some city was thinking about an ordinance, a smoking restriction ordinance, they would then put in, or they have some third party—they always tried to hide—a bunch of Public Records Act requests, the state equivalent of the Freedom of Information Act, demanding all kinds of information from the local health department, and under the law they have a certain amount of time to respond [Aguinaga, S. and S. A. Glantz. "The use of public records acts to interfere with tobacco control." *Tob Control* 4, no. 3 (September 1995): 222–30. PMCID: PMC1759453. Also see: Bialous, S. A., B. J. Fox, and S. A. Glantz. "Tobacco industry allegations of "illegal lobbying" and state tobacco control." *Am J Public Health* 91, no. 1 (January 2001): 62–7. Doi: 10.2105/ajph.91.1.62. PMID: 11189827; PMCID: PMC1446513. Note between these two papers, Stella Aguinaga married and changed her name to Stella Bialous]. And so the public health bureaucrats, who really should be spending their time educating the public and working with the policymakers about what do we know about secondhand smoke, or what's the right way to write a law if you want it to stand up, are busy searching their records and photocopying things. And it's just a diversionary tactic.

05-00:36:52

And, in fact, one thing they did over in it was either Alameda or Contra Costa County, which I thought was brilliant [described in Aguinaga, S and S. A. Glantz. "The use of public records acts to interfere with tobacco control." *Tob Control* 4, no. 3 (September 1995): 222–30. PMCID: PMC1759453], was they said to the tobacco company—or, well, it wasn't the tobacco company; it was the front group that they were—

05-00:37:08

Burnett: Californians for Scientific Integrity? [laughs]

05-00:37:09

Glantz: Well, it wasn't that one, but that was one they created to go after me, but some citizens for mom and apple pie groups. And so the local health department told this industry front group, "Well, we just don't have time to photocopy these files, but if you want to bring a copy machine in, we'll just let you rummage through our files and take what you want." And they invite the TV stations, and didn't tell the tobacco industry front, so when the tobacco people showed up there was TV cameras there, and they just turned around and left. I thought that was one of the—and just to illustrate the kind of dirty tricks that were going on.

05-00:37:57

And, see, one of the other things, and one of the other benefits of a lot of the early work we did, looking at these strategies, is if you're a public health official or an academic or something, basically they don't usually think of people being this sort of twisted and evil and malicious, and so they freak out when these people show up, or they don't know how to answer them. And one thing about the tobacco companies is they're big, they're aggressive, they're rich, they're willing to do all kinds of things that at the very least stretch norms, but they're not that creative, and so what they end up doing is applying the same strategies basically everywhere. And so, to some extent, there's a forewarned is forearmed aspect of this, and so if you can say to health groups or other academics, "This is what to expect, and they're going to show up, and here's how you deal with it, or here's how other people have dealt with it successfully, and here's things other people have done that didn't work," that's very, very helpful to people.

05-00:39:26

Burnett: Inoculation.

05-00:39:27

Glantz: Yeah. Yeah. And it's just different when somebody said, "You better watch out or X is going to happen," and then when X happens people shrug their shoulders and say, "Okay, okay, we're ready for that," rather than if it hits you out of the blue and you freak out.

05-00:39:44

Burnett: Right. Well, speaking of documentation and transparency and secrecy, something happens in 1994 that is the beginning of a new phase of this set of relationships. Can you talk about how you're related to that? What happens, from your perspective, and how do you react to this new development?

05-00:40:14

Glantz: Yeah, well, as we've been talking about, the work I was doing up until 1994 was mostly focused on two things: on secondhand smoke, both the biology of it, particularly as related to heart disease, although not entirely, and then policy, mostly looking around clean indoor air laws, but then also the politics of enacting and implementing state tobacco control programs. So that's what I was doing. At the same time, there was a parallel effort that I was not really much involved with at all to get litigation against the tobacco industry going. There had been product liability and tort lawsuits against the industry since the fifties. The first one was actually brought here in San Francisco by a guy named Melvin Belli, who was a very famous tort attorney, and the industry had really beaten most of that—or, in fact, all of it—back, up until that point. And the guy who was really kind of the Stan Glantz of litigation was a guy named Dick Daynard. He's still active. He's a law professor at Northeastern University. And he had got a journal going, a law journal, on tobacco products liability, and would do trainings, and he was playing a very similar role in that space to what I was doing in the secondhand smoke space.

05-00:42:03

And one thing that I'd heard about kind of off to the side was that there were some documents that had been snuck out of tobacco companies that were kind of floating around, and so I'd heard about them. I hadn't paid much attention to it. But on May 12, 1994, a box, a case of internal tobacco industry documents landed on my [office] doorstep, and it was about four or five thousand pages of internal documents that had been surreptitiously copied—I didn't know this at the time—by a guy named Merrell Williams, who was a paralegal working for a law firm in Kentucky that was going through and indexing Brown & Williamson Tobacco Company documents. B&W was a US subsidiary of British American Tobacco. And if you look at the instructions [to the indexers], they nominally were talking about indexing, but I kind of think they were looking for things to purge, because there was all this litigation by then going on, both private class action suits and individual suits, and also several state attorneys general.

05-00:43:35

And these documents landed on my doorstep. And it was about eleven o'clock in the morning, because I remember I used to teach statistics at noon. And so I opened it up, and I looked, and I said, "Oh, this is a bunch of internal tobacco industry documents," and they had just been thrown in a box. It was a big mess. And my initial reaction was, "Oh, I should call up Dick Daynard and send them to him, because this is about litigation, and I'm not the litigation guy; I'm the secondhand smoke guy." But I started looking through them and I just got [snaps] sucked in. I mean, there was stuff in there about me, and how they were trying to fight my work, and studies that we had done which publicly they were attacking; internally they were saying, "Oh, this is pretty well done." [laughter] And the metaphor I use: it was a little bit like an archeologist discovering a tomb, and I just got sucked into these documents.

05-00:44:42

And we went and we burned out two Xerox machines copying them, because I was afraid the tobacco companies would swoop down and get them, and so we made a couple of copies and shipped them out of state so that if somehow they [the tobacco companies, particularly Brown & Williamson] found out I had them and got them back, the cat would be out of the bag. And then just thought—I'm a professor; it's like, publish or perish—we need to write something about this, because this is just an amazing story. Because by then it was 1994, and I'd been involved since 1978, so that's sixteen years, and where I'd been doing battle with these companies, and when you're in hand-to-hand combat you kind of get to know the enemy. But you'd say to people, "These guys are very dishonest, and they're corrupting science, and corrupting the political system, and doing all these other bad things." And people would listen to you and nod their head and say, "We have drugs for that. You're just paranoid delusional, and nobody could be that bad." But when you've got it in their own words, and you can see them talking about—

05-00:46:03

For example, this was about the same time of the famous [congressman Henry] Waxman hearing [where the witnesses were all the executives of the major cigarette companies in April 1994], where the industry executives said nicotine is not addictive. Well, probably one of the most quoted documents in the entire collection was a memorandum from the vice president and general counsel of Brown & Williamson from 1963, which is before the original Surgeon General's report [which was issued in 1964], saying, "We're in the business of selling nicotine, an addictive drug" [Yeaman, A. "Implications Of Battelle Hippo I & II And The Grifffith Filter." July 17, 1963. UCSF Brown & Williamson Collection. https://www.industrydocuments.ucsf.edu/docs/hrwh0097]. And there was agreement from Sylvester Stallone to smoke in six movies for half a million dollars [Agreement Between B&W and Sylvester Stallone to Promote B&W Products in Films. April 28, 1983. Marketing to Youth MSA Collection. https://www.industrydocuments.ucsf.edu/docs/zpnx0045. Also Ripslinger, James. re: agreements between Stallone and Associated Film Promotions. June 14, 1983. Ness Motley Law Firm Documents. Unknown. https://www.industrydocuments.ucsf.edu/docs/jtpc0040], and stuff about how they were fighting local ordinances. And it was just amazing.

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And so what I ended up doing was getting the documents organized, and recruiting several colleagues to go through and just write about them, and to do a systematic analysis of what was in those documents. Now, whoever sent them to me also tipped a couple of reporters that I had them, in particular a guy named Walt Bogdanich, who at the time was working for ABC News, and had produced a segment for ABC on a documentary series they had back then called *Day One*, where he talked about nicotine spiking in cigarettes. And Philip Morris sued ABC for I think it was $12 billion over that story, which, in the end, ABC buckled and apologized or something. But somebody had told Walt that I had the documents, and so before I got them actually I got a call from him saying, "Has anybody sent you any documents?" I was like, "I don't know what you're talking about," and the next day the box showed up.

05-00:48:14

So he got on a plane and came out here, and it was the one time I ever made a reporter go through the PR department, because I wanted to get a little time to talk to UCSF's lawyer and see what can we do, what can we say. And I ended up letting Walt look through the documents and giving him an interview about them, but I said, "I want to keep my name as the source out of this." Because it was clear I wanted to write about them, and I figured the last thing I needed would be to be battling off yet another lawsuit while trying to do an analysis of all these documents.

[Bogdanich told me he might have to disclose the source to get the story on the air because of pressure from ABC's lawyers. I told him he could make the

disclosure if he absolutely had to, but asked him to resist. In the end, the story went forward without identifying me as the source. Later I learned that Walt actually had at least some of the documents but the ABC lawyers made him destroy them. For details, see the *Frontline* documentary *Smoke in the Eye.*]

05-00:49:01

So he did the story. He kept my name out of it, even though I was in the story being interviewed about the documents, so Brown & Williamson was a little stupid that they couldn't figure out who was giving the documents out. But they got it in their heads that the source was this friend of mind, Dick Daynard, and so they ended up suing him to try to get the documents back, even though I was the guy with the documents. And there's this very famous story from World War II where the Allies built an entire phony army in southern England to try to trick the Germans into thinking the D-Day invasion would be at Calais rather than Normandy. And the Germans fell for it, and even when the invasion started it took them about twelve hours before they realized that this is actually the actual invasion, instead of sending troops off to Calais. And Daynard, he knew I had the documents, because I told him, and he was a very good sport in that he just played along through this lawsuit for months so that we could do the analysis we did, and write a series of papers, that we ultimately published, essentially, the whole I think it was July 19, 1995 issue of the *Journal of the American Medical Association*. And that was sort of excerpts taken out of a book that we ended up writing about them called *The Cigarette Papers*. And I remember I'd hear from Daynard and his wife, because she's also a friend of mine, like, "Are you done writing those papers yet? Because we're tired of being sued, and we want to let them know that we don't have the documents." [laughter] But there were many heroes in the whole documents tale that let us move forward.

05-00:51:17

Another important player was George Lundberg [editor] and Drummond Rennie [deputy editor] at *JAMA*, who were interested in the papers, because the AMA's lawyer was horribly against them publishing these papers. He [the lawyer] just thought they would get [AMA] sued into the ground.

05-00:51:34

Burnett: I was going to ask about that, yeah.

05-00:51:36

Glantz: Oh, yeah. Oh, yeah.

05-00:51:37

Burnett: And the history of the AMA's being in bed with the tobacco industry.

05-00:51:41

Glantz: Yeah, well, by then the AMA had kind of turned around on the tobacco issue, but their lawyer was just sure they were going to get sued to death, because, remember, it's against the backdrop of them going after ABC, them going after CBS *60 Minutes*, who did the piece on Wigand, which the whole *Insider*

movie is about. I was in the middle of all that, too, and as Lowell Bergman, the producer for *60 Minutes*, said, it's a movie, not a documentary, but it's pretty close to what happened, when you allow a reasonable amount of kind of—

05-00:52:19
Burnett: Dramatic flourish?

05-00:52:20
Glantz: —dramatic flourish and time compression of things. [All these events and how they relate to each other are documented in *Smoke in the Eye.*] But the—

05-00:52:25
Burnett: So it was all concurrent? Was your dump the first?

05-00:52:29
Glantz: Yes. Yeah. And I didn't actually realize that nobody had ever done anything [like this before]. I was just focused in on what we had. And one of the other things that happened, another mistake that Brown & Williamson made, was these documents were getting picked up by the media. The person who sent them to me, I don't know if he sent all of them or a subset to a reporter at the *New York Times*, Phil Hilts, who had a story in the *Times* about them, shortly after I got them around, I think on the following Saturday. He didn't get the initial set from me.

05-00:53:13
And so what happened was British American Tobacco and Brown & Williamson said, "These are making us look bad," and they released another four or five thousand pages of internal documents to try to exculpate themselves, and to show, well, these are taken out of context, and blah, blah, blah. And it's true: the documents they released all looked pretty benign. But what I did, I got those, and I put them together with the original Mr. Butts box that I had gotten—because the return address was Mr. Butts, the *Doonesbury* cartoon character—but when you put them together these innocent-looking documents actually filled in a lot of holes in what I'd already had, and so you end up with a much clearer [and damning] picture of what's going on.

05-00:54:12
Burnett: Well, what it seems to reveal is the whole history, going back to the early 1960s, of the relationship—

05-00:54:21
Glantz: Oh, before that.

05-00:54:23
Burnett: Yeah. Well, the relationship between science, the industry, and the law, right?

05-00:54:31
Glantz: Oh, yeah.

05-00:54:31

Burnett: Broadly speaking. So can you talk a little bit about science inside the tobacco industry, what you were learning and what was most surprising about what was happening in the sixties? And then into the seventies there's a shift, as I understand.

05-00:54:48

Glantz: Yeah, well, actually, you need to go back to the fifties, and even before that. But the tobacco companies had two—well, before I get into that, I want to just divert a little bit and talk about *Death in the West*, because that's an important element of the story. And *Death in the West* was—did I already talk about that today?

05-00:55:13

Burnett: You talked a little bit about it, but with respect to preserving it. Can you talk a little bit about that?

05-00:55:19

Glantz: Okay, so what ended up happening—so *Death in the West* was made in England. If you watch it today, even, it's a very, very powerful film, when you're talking to these real cowboys who really got sick, and a purloined copy of it made its way to me. It had been broadcast one time in England. And it actually was sent to Peter Hanauer, who was a friend of mine [who was one of the leaders of the Proposition 5 and 10 campaigns and founders of Californians for Nonsmokers' Rights], who was the person who actually got me involved in this issue. And we were talking about it in the context of what was then Californians for Nonsmokers' Rights, and we realized—I mean, Californians for Nonsmokers' Rights didn't have any money. It didn't have any legal resources. And so we decided I would take it on as Professor Glantz, because that would bring it under the academic university umbrella, with the university's legal resources. And the original tape I got was a three-quarter-inch what's called U-matic. It was a professional videocassette, like they used on television back then. So we couldn't even watch it. It was also in what's called PAL [video] format, which is the British format. And now this is all stuff you just do on your laptop, but then it was like a big Megillah.

05-00:56:44

And so I went down and met with Joe Cowan, who was the UCSF lawyer, and said, "I've got this video. What should I do? I'm afraid somehow Philip Morris is going to find out about it and swoop down and get it back." And he said, "Why don't you put it on reserve in the library, in the video room in the library? Because no American court is going to order a library to take anything off its shelves. That went out in the thirties in Germany with book burning." And so I went to the library and said, "I have this hot tape. Could I just deposit it on reserve?" And we put it in the reserve collection. It was all properly indexed [in the library's public index]. We didn't promote it to anybody.

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In the meantime, Peter and I went out and raised enough money to send the thing [U-matic cassette] down to LA to get it converted to the NTSC, which is the US [video] standard, so we could actually watch it. But that idea of taking something hot and putting it in the library for safekeeping really set the precedent for later, when I got the documents. What was happening: they [the documents] were all sitting in a box on the floor in my tiny office [which was about six by ten feet], which was about a third the size of this room, if that; maybe a quarter. And so what happened is I had journalists showing up. The FBI showed up. The FDA showed up, wanting to look at the documents. And I would loan them the box, and they would take it off to Kinko's and copy them. I see your eyebrows going up, as somebody who works in an archive. [laughter] That's kind of not what you're supposed to do. And then it dawned on me that I ought to just take these and put them in the library, and let them manage access, because I was working on writing, and by then we made another set of documents. I had a copy here at home and a copy in my office and another copy for the people who were working with me on analyzing them. But the original set I gave to the library. And then if people called me, wanting to see them, I'd just refer them to the library, to Archives and Special Collections.

05-00:59:14

And the problem the library had, which they were happy to do, but the problem they had was that that was a period of budget cuts, like most periods, and they had a half-time archivist who was spending all of her time managing this box. And so Karen Butter, who was, at that point, the deputy librarian, came up with the idea of scanning the documents onto a CDROM, which back then—is the CDROM sitting here [looking a shelf]? Well, it's not jumping out at me, but it's somewhere in here.

05-01:00:02

Burnett: [laughs] The actual artifact, a copy of it.

05-01:00:04

Glantz: Yeah, well, or one of them. But that was another thing: it just shows you how things have changed. See, this is making me crazy that I don't see it, but it's here. But it was like this big.

05-01:00:20

Burnett: Right, it's CD-size [compact disc], right. Yeah.

05-01:00:21

Glantz: Yeah. And, again, that's something today you just do on a laptop, you know? But [then] it was a big production. We had to scan the documents, one page at a time, and then put them on a tape that was sent down to LA to manufacture these CDs, which we were then selling for five dollars or twenty-five dollars apiece [I can't remember for sure], to try to recover the cost of making them. But that way the librarian could get back to work, doing the Archives and

Special Collections stuff. The tobacco companies sent somebody to stake out the library, to try to figure out who was looking at them, because the library wouldn't tell them, because of privacy. So I was told to stay away, but apparently they had some middle-aged guy sitting out in front of Archives and Special Collections, trying to look like a student with a backpack, [laughter] watching who was going in and out of Archives and Special Collections. I was told, "I know you want to go see it, but just please don't go over there and get in a fistfight with this guy," so I never actually saw it.

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But then Karen [Butter] came up with the idea of putting them on the internet—and by then the word had gotten out that the documents were at UCSF. One of the private lawyers suing the tobacco companies in South Carolina, or somewhere in the Southeast, had been in court, and was trying to introduce a document into evidence, and the tobacco companies were saying it was a secret document, and he said, "Oh, well, these are all at UCSF." So that's how the tobacco companies found out. I remember I was in San Diego at a meeting and I got a call from I can't remember who—maybe it was from Daynard—saying, "Guess what: the tobacco companies know that UCSF is where the documents are at." And I was really pissed, because we were trying to write these papers [that ultimately appeared in *JAMA* and became *The Cigarette Papers*], and didn't want to have to be fighting off lawyers at the time. So the cat got out of the bag.

05-01:02:46

But then Karen had another idea. She said, "Well, we've got them scanned. Why don't we put them on the internet?" To which I said, "What's the internet?" [laughter] And—

05-01:03:00

Burnett: Because this is late '94 now, or early '95?

05-01:03:02

Glantz: Yeah, probably late '94, and maybe early '95. I can't remember. But it's like, what's the internet? But I said, "If you want to do it, it's fine with me." And I didn't realize it at the time, but that was the first time anybody ever did anything like this. If you look at histories of the internet, the creation of the Brown & Williamson collection at UCSF was the first time anybody had ever—this was before Wikileaks and all that other stuff—used the internet to disclose secret industry documents. And Brown & Williamson sued the university, trying to stop the release of the documents, and Christopher Patti, who was then in the Office of the General Counsel, defended the case brilliantly, and beat them. And I went down for the hearing downtown, and Drummond Rennie, who was on the UCSF faculty then as well as deputy editor of *JAMA* and who was the guy who'd convinced *JAMA* to get interested in what we were writing, we went down and watched. And on one side there was Chris Patti, a paralegal, and us, and the other side of the courtroom was just packed with all the tobacco companies and all their lawyers and

paralegals, and they had hired a firm called Latham & Watkins, which is a giant national firm with offices downtown. And Chris had told me, "Well, the judge is going to take all this under advisement, but he's not going to do anything. So we'll go have the hearing and in a few weeks we'll find out what the judge thinks." And at the end of the hearing the judge said, "I'm recessing for twenty minutes," and we came back and he said, "I'm finding for the University," which is very unusual [for a decision to be issued from the bench so quickly after a hearing].

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The whole case, it was an example of the kind of arrogance coming out of the tobacco companies, that they just weren't used to people standing up to them, because in the briefs that they submitted to the Court they found this appellate case out of Cleveland where some TV station, somebody had stolen a bunch of documents from a defense contractor in Cleveland, which I think was LTV [Ling-Temco-Vought], and then given them to a local TV station. LTV claimed the documents were stolen property and demanded them back, and the Court ordered them returned. And it went up, and there was a published appellate ruling, and so the tobacco companies were relying on it, and saying, "Look, in this case this TV station was forced to give the documents back to LTV. So there."

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Well, the thing they assumed was that Chris [and the judge] would take their word for what the appellate decision said, and the appellate decision did say what they [B&W's lawyers] said, but the next paragraph or so said, "But the TV station is free to photocopy the documents and do whatever it wants with the copies." And so he said to the Court, "Well, okay, if that's a controlling published appellate decision, just read the next paragraph, and it says where the University is okay." And the judge agreed, and off we went.

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And so one thing that had happened along the way was I was asked to put in a sworn declaration that we hadn't solicited the documents, we hadn't made the copies in the original [Mr. Butts] box that came to me, and then that the copies we were dealing with were photocopies made on the University's photocopy machine, with the University's paper. And it seemed to me that was kind of, who cares? But that ended up being actually a very important fact in the decision, and the companies appealed up to the State Supreme Court and lost.

05-01:07:29

Burnett: Meaning that the fact that it had been used, UC paper, that the University was involved, then the University was responsible?

05-01:07:38

Glantz: Yeah, well, no, but it was the copies that we were holding were physically property that the University—we hadn't stolen the original pieces of paper.

05-01:07:50

Burnett: Yeah. What about the claim around knowledge? I mean, I haven't read the decision so I'm not prepared to talk about it, but I wonder about them saying, "Well, never mind it being property; it's intellectual property," that there's knowledge that was secret, or proprietary formulas. Did they use that kind of strategy?

05-01:08:10

Glantz: Yeah, well, they claimed was that and they claimed attorney-client privilege, which is a very sacrosanct thing. And, in fact, the industry had a long history of claiming attorney-client privilege as a way of avoiding producing documents in litigation. But the advantage we had on that was we had the documents, and in previous litigation over documents the tobacco companies would say, "Well, you want this document, but this is protected by attorney-client privilege, or trade secret." And the plaintiff didn't have the document. You had to argue about it kind of in abstract terms, and maybe get the court to look at it and make a decision. Well, we actually had the documents, and so what Chris did was he found there was a professor at the law school at Berkeley who was an expert on attorney-client privilege, and so we gave him the documents, and he prepared a declaration, and he said, "I've reviewed all these documents, and with a couple of exceptions none of them qualify for—these are all normal course of business documents, and they're not protected by attorney-client privilege."

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And, in fact, another thing that came out of that, which ended up being very important in a lot of the subsequent litigation against the industry, was that the companies were taking, in a normal business course, documents, and running them past attorneys to try to put them under an attorney-client privilege umbrella, and the courts generally said, "No, that's an abuse of privilege claims." So those claims were asserted and rejected by the court. So that left us free to just do our thing. Well, in the meantime, we had written this book [*The Cigarette Papers*]. In fact, the book manuscript was written first, and then the papers were extracted from the book. And—

05-01:10:26

Burnett: Can you talk about the process of writing the book? I imagine the urgency was extraordinary. How did you muster the troops—

05-01:10:33

Glantz: Yeah, I sat at my computer behind you and was working so many hours that I actually almost gave myself carpal tunnel syndrome. I mean, I was getting weakness in my hands from typing. And I had pulled together a group of people—John Slade from New Jersey, who was an expert on nicotine addiction; Peter Hanauer, who knew about the legal stuff; Deborah Barnes, who was a postdoc at the time but knew about secondhand smoke and the industry. Who else? There's more people. Lisa Bero, who then was at UCSF, and had been a fellow with me, and was on the faculty. And she was looking

at industry manipulation of science. I think there may be one other person. I'm trying to remember. [There was not anyone else.]

05-01:11:27
Burnett: We can fill it in later, actually, yeah.

05-01:11:29
Glantz: Yeah, the book is right behind you.

05-01:11:30
Burnett: Okay. [laughs] There we go. Oh, yeah, right.

05-01:11:36
Glantz: So what we did is I had gone through and indexed the papers myself, and as the library said when I finally turned it all over to them, they said, "You've done a great, class A amateur job of indexing these documents." And that's when I started learning that archivists actually have standards for these things. [laughter] But I divided them up among the group, and then it was the sort of standard collaborative research model I always used, but different people draft the different parts, and then we circulated everything to everyone for feedback [on the other authors' sections], and then I put the pieces together [and recirculated the result another time or two for further feedback]. And we were sure this was going to be a hot book, and I tried and tried and tried and tried to send it to a lot of publishers. And getting back to what we were talking about, tobacco companies hunkering down and looking scary, was none of them were interested in it. Or there were a lot of people that were interested, because it was very topical at the time, because all this litigation was going on, but they were just afraid that the industry would sue them and shut them down. We'd had the industry, these very high-profile cases against ABC and CBS. And I got plugged into a literary agent, a woman named Jane Dystel, who's a very famous literary agent. One of the reporters who I'd worked with, he was her agent, and she said, "Oh, I'll be able to sell this in a week," and just couldn't get anybody to touch it, because they were just afraid of the tobacco companies. And Oxford University Press, they came the closest, but in the end they said, "We've done an analysis and we just don't think we'll sell enough copies to warrant the legal risk," and after they saying they were going to publish it pulled the plug on it.

05-01:13:52
I'd gone to UC Press, because they'd already published a book I'd written on mathematical modeling [*Mathematics for Biomedical Applications*], and they looked at it and said they thought the book was boring and turned it down. [laughs] So what happened then is when *JAMA* published the set of articles in 1995, they actually flew me back to Chicago, and we had a press conference about it. And one of the questions at the press conference was "Is there more?" And I'm thinking, well, do I want to say there's more and tip the industry off, or do I want to just sort of sidestep the question? I thought, well, I'm going to say there's more in hopes that somebody will hear it and call me

up and say, "Well, what's the more? We're interested in the more." So I said, "Yeah, we have a book we've drafted that we're trying to find a publisher."

05-01:15:03

Well, the director of UC Press was in his dentist's office that day, and the radio was on, and NPR played that little clip, and so he called up Naomi Schneider, who was the editor I'd been dealing with, and said, "I've heard about this book. I want it." So Naomi, who had earlier told me, "This is boring," and declined the book, called me back and said, "Actually, we want the book." And she said, "Could you not mention to my boss that I had turned it down?" But that's how UC Press ended up publishing it.

05-01:15:42

Burnett: Were you sued—

05-01:15:43

Glantz: I figure these are the kind of little flourishes that make for a good oral history. [laughter] No, we weren't sued. We were worried about it. And UC Press hired a lawyer, a friend of mine, a guy named Bill Hoffman, to vet the book, and went through it very, very careful. And there were no substantive changes. There were a few places where he thought the wording wasn't clear, or where he wanted more specific justification for certain statements, but they then cleared the book. And one of the interesting things he said, which certainly fit with my previous experience and was borne out by my subsequent experience, he said, "It's unlikely that a tobacco company is going to go after you directly, because if they did it would open them up to discovery, which is the last thing they want." So he said, "Your biggest risk is they'll get some third party to go after you." So we were extra careful about what we said about anybody that was working for the companies, or one of their front groups, or the scientists they'd been funding under the table, things like that, to try to minimize the chances of getting sued, and then we just held our breath.

05-01:17:22

And the same thing happened with *Death in the West*. In the end, people were afraid of getting sued, and they didn't. And, in fact, KRON TV, which at the time was the NBC affiliate [in San Francisco], put the entire film on air, twice, with a wraparound documentary to go with it, where they followed up on what happened to all the cowboys. And they aired it for a whole hour [thirty minutes of *Death in the* West and the wraparound material KRON produced] on commercial TV with no commercials. And the reason for that was because if you violate copyright, the thing you're liable for is your ill-gotten gains, and since the TV station made no money, there was nothing to sue them for. But we were very worried Philip Morris was going to swoop in, but in the end everybody was worried about it but they didn't, because I think people were just very, very careful. And it was a tremendously publicly-spirited thing that KRON did.

05-01:18:29

Burnett: Can you tell me a little bit about the conversations about the organization of the book, and the strategy around the papers that you wanted to publish with *JAMA* in '95? What emerged from the documents as the salient points that you wanted to write about?

05-01:18:51

Glantz: Right. Well, the documents, in the process of indexing them, in my flaky, do-it-yourself index, they kind of organized themselves. And so what happened was I tried to index them by subject area, and then you ended up with some major areas that they were about. And so that was basically those gobs of material, was how we organized the book. I mean, I came up myself with the structure, and then when I showed it to these people that I had recruited to help, everybody said, "Oh, yeah, that makes sense," maybe because they are already feeling overwhelmed to have this whole thing dumped in their lap.

05-01:19:42

And then for the *JAMA* papers, they said, "We'll give you four papers." We ended up with five. And what were the most salient things to pull out? And so if you look at the table of contents of the book, one thing was the search for a safe cigarette, because by the fifties the industry accepted that smoking caused lung cancer. They were still contesting it [publicly], saying, "We don't know," and it's doubt and all this other stuff, but there was no question to them that smoking caused cancer. And they had a codeword they used: zephyr. Zephyr, like a breeze. The California *Zephyr*, a famous train. "Zephyr" was cancer when they were writing about it. And through the fifties and sixties, they were of the view, which was pretty common at the time among the few people who were studying on the outside, that there were one or two or three or five or ten or some very small, finite number of bad chemicals in the smoke, and if they could just get rid of them then the cigarette would be fine. And so they spent a lot of energy trying to isolate what was causing the cancer and get rid of it. And there were a series of things: benzopyrene was one; benzene was another; I can't remember the other ones they looked at. And so it's like, okay, that's the bad thing, and we're going to engineer the cigarette to get rid of it, or almost get rid of it.

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And what they found, in doing that, was they could, in fact, identify some bad chemicals, and they could pretty much get them out, by reengineering the product, but then something else bad went up. The metaphor I think of is like trying to shove a balloon into a box that wasn't quite big enough. And so you could get most of the balloon in, but then something else would pop out. And so by the late sixties it was pretty clear that it just wasn't possible.

05-01:22:06

And the other thing that was going on at the same time is the lawyers were getting more and more concerned about legal liability, and saying, "You know, if anybody ever gets their hands on this internal research where you are

accepting the fact that this product is causing cancer, you could really get your pants sued." And so they finally kind of shelved all that by the early to mid-seventies. And so that's one part of the story. But this is another area where the tobacco companies' understanding of the science was way ahead of the general scientific community, and for its time very cutting-edge stuff.

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There's another chapter in there on nicotine, and addiction. And, again, the industry was still, as of the time we wrote the book, claiming that nicotine wasn't addictive, or they didn't know if it was addictive. But, again, you go back to the Addison Yeaman quote, "We're in the business of selling nicotine, an addictive drug." And one of the documents was about something called Project Hippo, and I thought, well, are they naming this project for cuddly, big animals? But it was hippocampus, which is in your brain. And they had developed an incredibly sophisticated understanding of how nicotine addiction worked, and then they were using that in order to do product design, and make the cigarettes as addictive as possible. And so we wrote about that.

05-01:23:46

Burnett: Increasing the bioavailability of the nicotine.

05-01:23:49

Glantz: The bioavailability, and getting it to the right place, and how fast should you be delivering it. People think of a cigarette as some ground-up tobacco wrapped in a piece of paper, and it's a very high-tech product. I mean, David Kessler, who was the head of the FDA and then for a while the Dean of the Medical School here at UCSF, I had heard him speak, and he said, "A cigarette delivers a metered dose of nicotine more precisely than most pharmaceuticals." And they knew how to vary the nicotine dose puff by puff, by how they packed the tobacco, and what additives they put in, and how fast the paper burned. And there's a tremendous amount of technology in a cigarette. So that was another chapter.

05-01:24:46

Another chapter was about what we called the "external" science, because the "internal" science, as I said, was very well done. The external science that they funded through organizations [the companies created] like the Council for Tobacco Research and the Center for Indoor Air Research and these other funding bodies they set up, the Tobacco Industry Research Committee, was all screened by lawyers, and designed to support the industry's legal and public relations and political needs. And they were very, very careful about who they did and didn't fund, and it was all part of their larger effort to keep the public as confused as possible, as long as possible, about the dangers of smoking, and later secondhand smoke, and to generate a bevy of experts that could testify in court, to generate a bunch of factoids that could be cited by sympathetic politicians who were arguing against regulation and legislation. And the industry had, and has to this day, a very sophisticated understanding of how science works, and how you can manipulate that process to get what

you want coming out the other end, and that was really the prototype for a lot of subsequent things, like global warming denialism. And there's a lot in the documents about global warming, and global warming denialism, because a lot of the same people that ended up working for the tobacco industry later went over, both the scientists and the PR people, working for the fossil fuel companies, doing global warming denialism.

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And then we looked at work on secondhand smoke. I think those were the papers in *JAMA*, and then we also had stuff about the industry's PR activities, and stuff about smoking in the movies. And to me, another very interesting quote is what we closed the book, were S. J. Green, who was the chief scientist for British American Tobacco, and a member of the board, wrote fairly early on, he said, "There's no question that smoking causes cancer." And he said, "An individual case, you can always contest it, because there's individual factors, but if you look at the population as a whole there's just no question, and it's just a matter of time before we get nailed on this." So he was very forthright [*The Cigarette Papers*, p. 441-442].

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And one of the things that really amazed me, getting into the documents, was just how frank [the tobacco company leaders, lawyers, scientists, and PR people were when talking to each other]—these guys who run these companies are not stupid. They're very, very smart. They're very frank in discussing these issues with each other. And just the contrast between that and their public positions was mind-boggling. And that's part of the power, even to this day, of the documents, in that when you go to policymakers, when you go to other scientists, when you go to the media and say, "Okay, here's what they were saying privately, and here's what they were saying publicly," and that contrast really changed, and continues to change, the discussion of policy issues around tobacco. And we've now added—this is kind of off to the side—collections on the sugar industry, on the petrochemical industry, on the fossil fuel industry, and we're getting the opioid documents now, and building that collection. And it's all letting people behind the curtain to see what's really going on. It just changed the discussion, and things that people just would have dismissed out of hand as just ridiculous, when you show them actually—when you look at the fossil fuel thing, internal documents show that Exxon accepted global warming like twenty, thirty years ago or whatever. And it's very parallel to tobacco: they were making business plans assuming global warming was happening, at the same time they built up this whole external superstructure to try to deny it and prevent any kind of meaningful regulation to head it off. It's exactly the same kind of behavior.

05-01:29:38

Burnett: And fairly fundamental in opening up a strengthened line of research on the social context of scientific knowledge production.

05-01:29:51

Glantz: Well, yeah, but the whole area of documents research, as legitimate science, it was very much the same attitude—I mean, if you go way back to when I was doing cardiac research, and cardiac mechanics, I managed to force papers into the physiology literature with equations in them, because I felt like physiologists needed to realize physics is important, too, and even though reviewers would say, "We don't understand this. Why are we having to look at it? This is weird. Go publish in some engineering journal that nobody would look at. Who cared about hearts?" [laughter] No, you need to do this. And so by getting stuff into *JAMA*, getting stuff into other major journals, as we developed this whole area of documents research, it legitimized and created a whole new field. And Bill Clinton was president then, and he read the *JAMA* issue and told NIH, NCI, "I want you to fund research in this area." So they actually put out a request for proposals for people to do documents research. And I put a proposal in, and that as funded. Again, that grant, it ended finally last June 30, after I retired. Pam Ling took it over. And that spawned a whole area of investigation. There's been about a thousand papers written out of the documents [https://www.industrydocuments.ucsf.edu/biblio/].

05-01:31:42

And, interestingly, I'm just reading a book about Juul, Lauren Etter's book about Juul [*The Devil's Playbook*], and it turns out the people who invented Juul went into the documents to learn what the tobacco companies knew about addiction and nicotine manipulation in order to design this incredibly addictive Juul e-cigarette. In fact, now I'm reading the book and really appreciating the depth to which the documents played an important role in the development of Juul, which is more evil than a cigarette, even, because it's digital, and it came out of our work making the documents available. I've had reporters say, "Well, what do you think about that?" And it's like, well, I wish they hadn't done it, but the whole idea was just to make them [the industry documents] available to whoever wanted to look at them, and they could look at them. It's kind of a drag, but it's all part of just getting the stuff out there.

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Burnett: Yeah. The sunshine would help, hoping.

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Glantz: Yeah, and I think even with the contribution they made to the creation of Juul and all the bad things that have flowed out of that, still I think the net benefit of that stuff being out there, and people thinking to look in there for stuff I'd never thought of—one of the things a lot of people said to me when I first got the Brown & Williamson documents, and later as the collection grew—because it's about a hundred million pages now—it's like, why are you making these public? Why aren't you hoarding them? And you have this huge research resource, and you should just milk it for all it's worth, and then take whatever's left and make that available. And I didn't do that. I just said, there's more here than I can ever do, and we should just get this stuff out to the public, and if somebody beats us on something, well, life is hard. We have lots

of things we could be doing. And still, as we're building these other collections, there's a couple sources that have documents, not on tobacco but in the other areas where the library's building the collection, and they only will give them to the library to make them public after they've exhausted them. And I've had long discussions with—I don't want to mention any names—the person involved, saying, "No, no, just throw everything out there, and let everybody have at it, and you'll be ahead of them, don't worry." But I know some people thought I was crazy. And I think that was one of the best decisions I ever made, because there everybody brings their own kind of knowledge and experience to these documents, and there are papers that have been written out of these documents that in a million years I would have never even thought to ask the question, and it enriches the body of work for me and everybody else.

05-01:35:12
Burnett: Well, that's a question of what is the public university.

05-01:35:16
Glantz: Yeah.

05-01:35:16
Burnett: It's not on the topic, but I had some research on the development of open source software at Cal for integrated circuits, and they just gave it away, and other people then made money doing that, and you hope that that has some benefit in the world, but UCSF is a public university, and you are thinking, I imagine, of the public good, right?

05-01:35:49
Glantz: Yeah, but there are still lots of people at UC who want to patent everything, and—

05-01:35:55
Burnett: Well, that's the change, isn't it?

05-01:35:57
Glantz: Yeah, and that's actually another area I've been involved in is this whole issue of private—we'll probably get into that later—

05-01:36:07
Burnett: That's another session. That's another session, yeah.

05-01:36:09
Glantz: —but privatization of the university. But the interesting thing—I mean, I got involved in a lot of budgetary issues, and ended up chairing the [Senate] budget committee at UCSF, and then the systemwide Senate Academic Planning and Budget committee, and the back-and-forth about whether it's the campus or the president's office that's in charge of patents and intellectual property keeps moving back and forth, and there have been books written about this, actually, that this whole effort to privatize knowledge in the hopes of the universities and the faculty making money on it, it, by and large, has

been a bust. There have been a couple of spectacular financial successes, like the Genentech patent that UCSF owns part of, but for the most part these efforts to privatize that income under the Bayh–Dole Act have been a bust. And, in fact, the development of a lot of open source software at Berkeley is often cited—Unix, for one thing—as how in the end just throwing this stuff out there to the public, in terms of actual impact, is a much better thing to do than trying to hoard it.

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And I can tell you from my experience with the documents, I don't regret the decision I made to just throw this stuff out there and let it go where it may. I've never looked at it and said—you know, there are things in life you wish you could go back and do over, and that's not one of them. I think that was one of the smartest decisions that I made, because the impact that that effort has had is so far beyond anything we could have even dreamt about at the beginning, and the way that it has really fundamentally changed the discussion of these issues for tobacco, and then spreading out into other areas all over the world, if you'd have said to me, "Guess what's going to happen twenty years from now, that this collection's going to be a hundred million pages, and that it will have contributed to passing global treaties and legislation all over the world, and the creation of the Juul monstrosity," I would have just thought, that's crazy. But it was a good decision.

05-01:38:55

Burnett: Yeah. I have a question about your encounter with the documents, and the moral question of the science being done? There's a phase which is devoted to harm reduction of the cigarette, right, before the fact, this idea that the cigarette could be safe, and so are there these moral moments for you in this story where there is a consideration, well, what can we do to make this safer, and organizing that research, that then turn into something darker when there's a dead end and they're doubling down on what they've been doing?

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Glantz: Yeah. And Dorie Apollonio, who's a colleague at UCSF, has actually gone back to the early twentieth century, when the modern cigarette industry started to evolve with the advent of the cigarette manufacturing machine in something like 1898. And the tobacco industry figured out very early this stuff is bad, and there were several waves of efforts to develop products that were safer, and they just all failed. And I think if you look at the efforts in the fifties and the sixties, I think those were genuine, well-meaning efforts. I think that they weren't being willing to talk about it publicly, but if you look at their private discussions, it was like here are a bunch of guys who'd been making this agricultural product, and making a lot of money, and there'd been a little bit of grumbling, going back to the twenties, actually—in fact, back to King James, or some famous quote from him, or somebody in the seventeenth century [King James I, *A Counterblaste to Tobacco*, 1604]—but the serious effort to engage the issue really took place and began in the '50s and the '60s.

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And I think that was all serious, and they believed that there was just a bad thing or two in there, and let's just get rid of it, and wouldn't we be great? And it's too complicated. The biology and the physics of it is just too complicated. And so later the whole harm reduction became a marketing tool, and I think if you compare what they were trying to do in the fifties and the sixties, with the later, quote, "reduced harm" products, beginning with cigarette filters, which were presented as a health measure but it was really a marketing tool. It just continues to this day. And if you look at e-cigarettes, for example, where there's still this hot debate in the health community about, well, they view me as a really bad person because I think e-cigarettes are bad, but they're harm reduction because you don't have combustion, so you don't get all the combustion products, which is true. And so you don't have all the bad effects of the combustion products, but it's a little bit like this issue of pushing a balloon into a box that isn't big enough. So e-cigarettes, it's true, on certain dimensions don't expose you to as much bad stuff as a cigarette, but then there's propylene glycol and glycerin, and all the flavoring agents, and they produce a lot of heavy metals because of the heater coil, and so you're really just generating a different risk profile. And so when you step back and look at it with your glasses off, when you can't see very well, they're about as bad as a cigarette, it's just that they're bad for different reasons, and in a different way.

05-01:43:22

And the creation myth for e-cigarettes is that, well, it was this new, disruptive product that came out of China, invented by a Chinese pharmacist named Hon Lik. Well, in fact, if you go into the documents in the nineties, Philip Morris had a working e-cigarette, and they just didn't take it to market for political reasons [Dutra, L. M., R. Grana, and S. A. Glantz. "Philip Morris research on precursors to the modern e-cigarette since 1990." *Tob Control* 26, no. 2. (December 2017): e97–e105. Doi: 10.1136/tobaccocontrol-2016-053406. Epub November 15, 2016. PMID: 27852893; PMCID: PMC5432409]. And another product, which they're pushing now, is a heated product, what's called IQOS, and the other companies have comparable products. If you go back and read the marketing research that led them to develop these products, if you go back into the late eighties when they started the R&D programs that led to these current, quote, "modern" products, there was nothing in there about harm reduction, or helping people quit smoking, which is the way groups like the FDA talks about them, and some people within the health community. And that isn't at all what the tobacco companies were saying. What they found was that a lot of people were quitting smoking because they were health concerned, and they were looking for products that they can market to those people to keep them as customers, because they viewed the alternative to quitting. It was an alternative to quitting. And they never said, "Oh, well, let's develop a safer product." It was like, "Let's develop a product that people who are worried about their health will use so we keep them as customers."

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In fact, Dorie Apollonio and I wrote a paper out of [the documents]—and they also talked about getting into the nicotine replacement business. And the title of the paper is "If we're going to lose customers, it should be to us [Apollonio, D. and S. A. Glantz. "Tobacco Industry Research on Nicotine Replacement Therapy: 'If Anyone Is Going to Take Away Our Business It Should Be Us.'" *Am J Public Health* 107, no. 10 (October 2017): 1636–1642. Doi: 10.2105/AJPH.2017.303935. Epub August 17, 2017. PMID: 28817320; PMCID: PMC5599147]." [laughter] And that was a direct quote out of one of the documents. And I say to people at the FDA and to the increasingly shrinking group of people in the health community who are still supporting these products, it's like, look at what the tobacco companies were saying, and what they were trying to accomplish, and then look at how this is all playing out, which is pretty much what they set out to do. They've been very successful. And it's like, "Ah, don't tell me about that." It's very frustrating, because here's what they said they were doing. Here's what's happening, which is what they were hoping would happen. It's overall continuing the epidemic; it's just morphed a little bit. And it's like, "I don't want to talk about that;" "but there's no fire."

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And it's just turning out, if you take that and combine it with the independent research that's been done, it turns out that this whole idea that the fire is the problem, and that if you can get rid of the combustion you can really make a big difference in terms of product types, which I thought, too. Everybody thought it. It's wrong; that if you're generating an aerosol of ultra-fine particles containing nicotine and a bunch of other chemicals and inhaling it, that's bad. It's just different bad than inhaling a bunch of combustion products.

05-01:46:50

Burnett: So in the research, one of the major problems is that this is post-safe cigarette, right? That the low-tar, low-nicotine, filtered cigarette is the marketing outcome, and one of the key pieces of research that comes out of the work that you and others did was this research on smoker compensation. So they had figured out that a low-nicotine cigarette, a smoker will smoke more of them to get the dose. The dose is the goal of the addicted figure. So—

05-01:47:37

Glantz: And they use that to design the cigarettes.

05-01:47:39

Burnett: Right. Is that the key to this? If it's a moral problem, in terms of this is a disease vector, yes, in a scientific term, but the moral problem is that there is a design around manipulating the will of the consumer, who under a free society should be free to choose and reject a product.

05-01:48:06

Glantz: Well, yeah, that's part of it, but the other thing is that the nicotine changes your prefrontal cortex, and affects your decision-making process in choosing, so it's even more pernicious than what you're saying [Song, A. V., P. Brown, and S. A. Glantz. "When health policy and empirical evidence collide: the case of cigarette package warning labels and economic consumer surplus." *Am J Public Health* 104, no. 2 (February 2014): e42–51. Doi: 10.2105/AJPH.2013.301737. Epub December 12, 2013. PMID: 24328661; PMCID: PMC3905322].

05-01:48:23

Burnett: Absolutely. So this goes back to one of your earlier statements near the beginning of our conversations: the early conclusion that the secondhand smoke advocacy was the biggest threat to the industry, because it removes the context and the contact in which a smoker is going to have those positive re-enforcements of smelling that smoke, of being exposed to it. Any smoker knows that you can't quit if you're around smoke all the time.

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Glantz: Right, right, and the industry knows that, too, and that's why they fight so hard against restrictions on where you can smoke, because most smokers don't want to smoke. Most smokers are trying to quit. And if you remove that stimulus and that opportunity, it actually makes it easier for them to quit. For example, there's now research showing that if smokers make their home smoke-free—we've done some of this, actually, but there's a big literature—that nicotine replacement therapy and the smoking cessation treatments work better. Because what happens is you take the decision to smoke and move it from an unconscious or a semiconscious decision to a conscious decision. In the olden days, your blood nicotine in your brain got below some threshold. Your nervous system said, "I need nicotine." You put a cigarette in your mouth. Now, if you want to put the cigarette in your mouth, you've got to make a conscious decision to get up and go outside. And that takes the decision to smoke the cigarette away from just a reflex to a conscious decision, and since most smokers would like to quit, they say, okay, well, now I'm thinking about it, I'm not going to go outside. And so it increases motivation to quit, and it increases efficacy of quitting. And the industry had that figured out back in the seventies. And, yeah, that's all stuff we now know in hindsight, and all I was trying to do, and the people I was working with in the clean indoor [air] stuff, was we just didn't want to breathe secondhand smoke. We weren't thinking about all of these subsidiary benefits, but they're substantial.

05-01:51:05

Burnett: Yeah. And you read those in the documents. That was a shock to you, to sort of—not a shock, but—[laughs]

05-01:51:09

Glantz: Well, by then I'd kind of reached—because this is another area where the industry was just way ahead of everybody else [Schane, R. E., S. A. Glantz, and P. M. Ling. "Social smoking implications for public health, clinical practice, and intervention research." *Am J Prev Med* 37, no. 2 (August 2009): 124–31. Doi: 10.1016/j.amepre.2009.03.020. PMID: 19589449; PMCID: PMC2771192]. I mean, another thing that we wrote about, out of the documents, was that light and intermittent smoking, which the medical and health community thought was an unstable pattern, where you either were going to be an addicted pack-a-day smoker or quit, so this light and intermittent smoking was viewed as an unstable transient phase. And certainly, if you look at the industry's marketing, they do everything they can to push you along that spectrum, but they had figured out in the seventies that about a quarter of smokers were light and intermittent smokers. And so they developed brands for them and marketing campaigns to just keep them there, because if they're smoking a little bit they're buying more cigarettes than if they're not smoking at all. And that really informed a lot of the subsequent public health work.

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If you go back to the seventies, the average smoker smoked a pack a day. All the therapies we have are based on this heavily-addicted smoking. Well, here in California now it was something like five percent of smokers are smoking a pack of day. So the whole what's called topography of smoking today is wildly different. And we've written stuff, and others have, looking at the industry's understanding of these processes, and say, ah, here's how you can design health interventions based on what the industry knows in order to get to those people and help them quit. So even to this day all these years later there's still lots of interesting stuff to find in those documents.

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Burnett: And having to tweak the public health strategy and the research—because I think twenty-five years ago there was this narrative about a low rate of smoking, below five to ten cigarettes a day, you're getting around ambient air pollution of a congested city, right? And so you would presumably need research that would show how harmful even a small amount of cigarette smoking is.

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Glantz: Yeah, and that work is out there. I mean, the other thing that a lot of the harm reduction argument is based on that's turned out to be wrong is the proportionality in the response. This is very big in England still. It's like, well, if we could cut people's smoking in half, isn't that great? Well, if you're talking about heart disease and stroke and vascular disease, the difference between smoking ten cigarettes and twenty cigarettes a day in terms of risk is almost nothing. If you're smoking a cigarette or two a day, you're getting half or two thirds the risk of being a pack a day smoker. And so there's a lot of nonlinearities in the system.

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The same thing is true when you're looking at these e-cigarettes and other new products. I mean, there are things that they expose people to higher levels of, but the exposure levels are less, but if the dose response curves are nonlinear it doesn't make that much difference. And that's a complicated idea to get through to a lot of people, but there's no question that it's true, at least for heart and vascular—

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Burnett: The single cigarette—

05-01:55:02

Glantz: Yeah, single cigarette is maybe twenty, fifty percent the risk of a pack, in terms of heart and vascular disease, stroke, things like that.

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Burnett: Right. It's a shock to the system.

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Glantz: Yeah. And the other thing is when you talk about the cardiac and vascular effects, and effects on blood platelets and stuff, you're dealing with systems where there are receptors, and the changes that you cause are due to occupying receptors, and there's a finite number of those receptors, and once you've occupied them, whatever things are happening have happened, and if you further flood the system with more toxins, where there's nothing or very few places left for them to attach, it doesn't matter. And that's different from something like cancer, where it's more probabilistic.

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And the other thing is when you look at a cigarette or an e-cigarette or one of these other products, the levels of pollution when you inhale it that you're exposing yourself to, compared to most pollutants, is astronomical. And so on some of these things you just saturated the system, and the big effects are those initial exposures, and the lower-level exposures that are enough to trigger a lot of bad things.

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And I talked about this in one of our earlier talks. I think one of the things which has allowed me to contribute quite a lot in this debate is I understand the biology. I understand the politics, I understand the epidemiology, and I understand the biology. And there aren't very many people out there that are conversant in all—I mean, I'm not trying to toot my own horn here, but that ability to talk about what's happening to platelets, and what's happening to nitric oxide, and receptors in the vasculature, and then link that to exposures, and then to what you see in the population, and then convert that into policy, there just aren't a lot of people who span that spectrum. And it's allowed me, I think, to have a lot more influence as a thought leader than a lot of other people.

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And, in fact, we'll talk at some point about the Tobacco Center, but that's one of the reasons that we've put so much emphasis on cross-disciplinary thinking, is to get people to understand things outside their narrow little area of expertise and start making those linkages, because there's a lot of power in being able to move across different areas of knowledge.

05-01:58:02

Burnett: Absolutely. Why don't we pause now and we can take up the session six?

05-01:58:07

Glantz: Okay. Did you get what you wanted?

Interview 6: August 2, 2021

06-00:00:12

Burnett: This is Paul Burnett, interviewing Dr. Stan Glantz for the UCSF University History Series, and it's our sixth session, and it's August 2, 2021, and we're here in San Francisco. So the last time we talked, we were just at the point where we would talk about the foundation of the Center for Tobacco Control Research and Education. Part of that is, of course, where the money comes from, and I'm wondering if you could tell us a little bit about the Master Settlement, and how it comes to be that UCSF becomes a center for tobacco control research through that settlement.

06-00:01:07

Glantz: Okay. Well, UCSF was already a center for tobacco research long before the Master Settlement came along, and there was the work I was doing on mostly secondhand smoke. There was work being done, a lot of work on smoking cessation. There was work on nicotine addiction going on—Neal Benowitz, and the people at San Francisco General. There was work on the economics of smoking done in the School of Nursing by Dorothy Rice and Wendy Max. And so there was actually quite a lot happening in tobacco research at UCSF before we created the Center.

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The thing that wasn't happening was that it wasn't coordinated and integrated. Everybody was friends and helping each other kind of informally, but there was no structure to it. And so what the creation of the Tobacco Center did is it provided a structure to bring people together in a regular way. It allowed us to create a formal training program, and really much better integrate what was going on, and the result was a lot of synergy, and so the whole effort got a lot more powerful and influential.

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So, just for people who don't know, in the nineties there was a lot of litigation against the tobacco companies run by states. It initially started with a few states. Mississippi, Texas, Florida, Minnesota, West Virginia, Washington, and Massachusetts were the first ones to come in. And ultimately none of these cases actually went to a verdict. And the whole way the legal system is structured, it's really designed to try to encourage settlement of cases and to avoid trials. Something like ninety, maybe even more than ninety percent of cases settle. The whole system is just designed to press for that. But the tobacco companies' strategy, on the other hand, was to never settle. If they lost, which had happened until that point once, they would appeal. And there was a famous quote from [Gen. George] Patton in World War II about your goal isn't to die for your country; it's to make the poor bastard on the other side die for his country. And there was a tobacco lawyer who made a similar statement, and he said, "Our goal is to just litigate until the plaintiffs run out of money."

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And so people were very reluctant to go after the tobacco industry. The first case actually had been here in San Francisco in the fifties, from Melvin Belli, who's a very famous tort lawyer., In all of those cases the industry just mounted massive defenses, and spent way more money than was logical in terms of the individual case. It would have been much cheaper for them to have settled [an individual case]. But they just litigated these things into the ground [because they didn't want to establish the precedent of settling for fear that it would open the flood gates]. They finally lost a case in New Jersey called *Cipollone* [*Cipollone v. Liggett Group, Inc*] but then appealed and won on appeal, and just got to the point where the plaintiff's lawyers just gave up. They ran out of money.

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But in addition to that, a key element of the industry strategy was blaming the victim. So if you sued they would hire an army of private investigators to figure out everything about you, and when you were fifteen years old you had mononucleosis, and that's why you got cancer. And they would just come up with these endless explanations, and just torture the plaintiffs, too. So it was a very high mountain to climb, and proving individual causality in a case where you're dealing with something where there are several causes of cancer, several causes of heart disease, proving that it was that brand of cigarettes that did it in individual is really hard.

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Well, what happened in the nineties was a new set of players appeared, and among the private lawyers they started bringing class-action cases, where they weren't focusing on individuals; they were focusing on groups where you were talking about statistically you might not be able to demonstrate that smoking caused cancer in this [particular] person, but in the aggregate you could make a pretty strong case of how much of the total cancer was caused by tobacco. And, in fact, if you look in the book *The Cigarette Papers* [pp. 441–442], the very last industry quote in there is from S. J. Green, who was the chief scientist at British American Tobacco and a member of the BAT board, and he said, "Look, we can contest causality in an individual case, but there's no question that at a population level smoking causes cancer, and we're going to get nailed with that sooner or later." So that's what the private [class action] plaintiffs were going after.

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And then we had the appearance of the state attorney generals. And the first one was Mississippi. In fact, if you watch the movie *The Insider* [1999], it's a fictionalized account, but it's actually pretty accurate about the Mississippi case. Other very important ones were Minnesota, Florida, Texas. And the AG cases had a completely different legal theory [than product liability], and that was fraud, and saying that the tobacco companies had systematically lied to the public to keep them saying they didn't know smoking caused cancer, that smoking wasn't addictive at the time they were manipulating the products to

addict people, and by lying and committing fraud they were forcing the states to pay money through Medicaid to pay for all that smoking-caused illness, and they were suing to recover that money. And, in addition, they were seeking injunctive relief to limit the marketing to kids.

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And so there were a couple of really important things that changed. One was it shifted from individual plaintiffs, where you could go after Joe Jones and say, "Ah, well, look, this guy didn't smoke our brand," or, "This guy breathed paint thinner; he was a painter and he breathed turpentine, and that's why he got lung cancer." That was all gone. And then the second thing was the industry's behavior became the issue. And they had a really, really hard time with that. And, as I said earlier, cases settle, and so the tobacco companies actually decided to settle, which was, again, very, very unusual. I mean, the first one was Liggett, which was the smallest company, and then Liggett settled and basically said, "We'll turn states evidence in this," and that really freaked out the other companies. And then, finally, as the Mississippi case was going to trial, they settled the Mississippi case. And what they agreed was to basically pay the estimated cost of smoking to the State of Mississippi. And there was a little bit of injunctive relief about marketing to kids.

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Now, UCSF actually played an important role in that, because Wendy Max—I mentioned a lot of work on the costs of smoking were done here—she actually developed the economic model to estimate how much smoking was costing Medicaid in Mississippi. And so her research formed the basis for the formula in the Mississippi settlement.

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But another very, very important aspect of the Mississippi settlement was—and this is pretty standard for settlements—it contained something called a most-favored-nation clause. What that says is if anybody gets a better deal later, those better terms apply to us [the earlier settling plaintiffs]. And the reason those are included is to encourage settlements. Well, the second state to settle was Florida. Florida got more money, and they also got money for an antismoking program, and some more restrictions on tobacco industry marketing. And then what that meant is, well, Mississippi got more money, and they got money for an antismoking program, and the additional injunctive relief. And so that was great. But there was something in the Florida settlement that said, well, you can do an antismoking campaign but that you can't "vilify" the [tobacco] industry. You can't say anything mean about them. And Florida actually is where the "truth" campaign got started. What they did, they couldn't say anything mean about the *tobacco* companies, but they made these wicked ads going after their advertising agencies, [and other kinds of] companies that worked for the tobacco companies.

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And then the next state to settle was Texas, which got still more money, got some more injunctive relief, and got rid of the vilification clause. And then I think the next one to settle was Minnesota. Now, Minnesota was, from my point of view, or UCSF's point of view, the biggest, most important case, because [most of] the other states, in terms of discovery—that is, collecting data that will be used in the trial—their strategies were basically get a few hot documents—and the documents that had come to me were all playing very heavily in this—and some compelling witnesses, and put on a good show for the judge. That was basically their philosophy. And, again, if you watch the movie *The Insider*, you can see that playing out.

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Minnesota had a different strategy, and that was to very aggressively pursue document disclosure. And Hubert Humphrey III, who was the AG in Minnesota, went to the Supreme Court I think six times before the companies finally were ordered to produce the documents Minnesota wanted. Minnesota felt that if they could get a look behind the curtain, they would find all kinds of evidence of fraud and other bad behavior by the industry. And they fought and fought and fought and fought, and finally won, and then the industry, in responding to the document request, made a gigantic strategic error. They engaged in a practice lawyers call "papering." So probably if the industry would have produced what Minnesota legitimately could ask for, they would have probably produced a couple million pages of documents, which they did. But they also produced around twenty or thirty million pages of other stuff that was just chaff, and it was like, "Documents? You want documents? Here." And they filled up a warehouse in Minnesota and another warehouse in Guildford, England. And they [the tobacco company defendants] said, "Have at it, boys." And as Humphrey said to me, the thing they forgot was that it's really cold in Minnesota, and the warehouse was heated, and so they went through all those documents and found all kinds of really damaging stuff.

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And so Humphrey started saying that "the most important thing to come out of the litigation is the truth." It's more important than the money. It's more important than any kind of minor restrictions we can get on the industry's marketing. And the Minnesota case settled. I think it settled right before it went to the jury. You could check that. But Humphrey absolutely insisted on those documents being made public, and they actually got less money because of their insistence on the discovery documents being released. And this was a radical, radical thing to do, because the normal protocol in this kind of litigation is that when the case settles, all of the discovery documents are either destroyed or given back to the defendants. So the fact that Humphrey just demanded these things be made public was just a radical departure, and if you jump forward in time that corpus of about twenty or thirty million pages, we had already created the little Brown & Williamson collection with the documents I had, which I think we talked about last time, but we ended up

bringing all that [the entire Minnesota collection] online at UC, and just turbocharging making the documents available to everybody.

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And so the Minnesota case settled. That happened. And they all had most favored nation clauses, so I was happy as a clam. I just thought, you know, we should just keep settling these cases one at a time, because the states kept getting ratcheted up, and it's like, this is great, you know?

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Burnett: Before we go on, you mentioned in passing that the Tobacco Documents at UCSF were in play during some of these cases.

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Glantz: During all of them.

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Burnett: Well, can you talk about the fact of the existence of these publicly available documents, and the strategies of these lawsuits? Did you know? Did you talk—

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Glantz: Oh, yeah. I mean, I kind of tried to maintain a little distance. I got asked to be a paid consultant in all these cases, and I said no to all of them. It wasn't like I didn't talk to the lawyers. I was happy to talk to them. I would have been happy to talk to Philip Morris, if they'd have called. But I felt like, as the keeper of the documents, in collaboration with the library, it was very important for me to stay at least a little bit above the fray and to not have any financial skin in the game, because I got deposed a couple of times, and the first question they ask is "Are you a paid expert for anybody?" And it's much easier to answer, "No," even though I could have made a fortune, absolute fortune. But you don't become a professor to get rich. You become a stock broker or real estate speculator or something.

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The documents played very important roles in the litigation, because what the documents did, which I think I talked about before, is you went from speculating or inferring what was going on inside the companies to reading about it. And my favorite story I heard was there was a case somewhere in the Southeast, and the plaintiff's lawyer was trying to get a document into evidence, and the industry was objecting, saying, "That's a confidential document, and it's protected, and it's secret, and blah, blah, blah." I wasn't there, but I was told this story. So the plaintiff's lawyer took a laptop up to the judge's bench and pulled the document up from the UCSF [Brown and Williamson] collection, and said, "Here's the document, Judge." And the judge said, "Can anybody go on the internet and read that?" And he said, "Yeah." He said, "I'm letting it in. It's not secret."

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But those [Brown and Williamson] documents, the [initial] UCSF set, was very, very important in building up to the cases. And then when the Minnesota case came forward, they had much, much more detail, much more depth [in the documents Minnesota had secured through the discovery process] than the [Brown and Williamson] collection I had. It was all pretty much consistent, but it was way more detailed. And so—

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Burnett: So that was the watershed, really, of this kind of publication and disclosure, and the mountain of evidence of the practices of the tobacco industry. But that leads, then, to the next step, which is, I guess, this ultimate master settlement, like—

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Glantz: Yeah, so I'll talk about that next. So what happened—well, before I do that, I want to just explain why the papering was such a stupid move on the industry's part. There's stuff in there like Sylvester Stallone agreeing to smoke in six movies for half a million dollars. There's stuff in there in the Uzbek language about how BAT corrupted tobacco policy in Uzbekistan by paying off the president. There's stuff in there about meddling with the WHO [World Health Organization]. There's stuff in there that has absolutely nothing to do with the Minnesota case, but it's golden material for the rest of the world. And by dumping all of this stuff in the record, it led to this creation of a whole new area of research in terms of industry documents research that basically I invented, or I and a couple other people at other places were doing it.

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Well, so then things continued on, and the next case to go to trial was Washington State. And the AG of Washington State, Christine Gregoire—or the industry went to Gregoire, the AG, and said, "We're not going to settle with you unless we can settle all the remaining cases, and we want a master settlement." Now, actually, the deputy AG running the case [Jon Ferguson] was furious. He thought he had a great case and wanted to take it all the way to trial. But Gregoire said, "No, we're going to try to do this settlement." And a committee was put together to negotiate a master settlement of all the remaining cases, and the industry had a lot of influence over who was on the negotiating committee, and I'm pretty sure it included Dan Lungren, the Republican Attorney General of California who up until that point hadn't sued, so he had to file a lawsuit to get in the deal. And they had some people on the committee who were very sympathetic to the industry.

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And so what came out of the MSA [Master Settlement Agreement]—I think we would have been better off to just continue the individual settlements—but the MSA came out kind of okay. The first thing is the formula for reimbursing states for smoking-induced Medicaid costs is written into the settlement.

Again, it was developed by Wendy Max here at UCSF. It's a complicated formula, and it was modified to account for when the suits started to reward the ones [plaintiffs] who came in early [because they took higher risks and led the way]. There were several cities, like San Francisco, who had sued because the State of California was refusing to get involved because of Lungren. So there are all those little complications, but it created a formula for the companies to pay the states and some cities in perpetuity. A lot of people think it was just twenty-five years because it was [estimated to be] $246 billion over twenty-five years, but that was [just] the first twenty-five years. As smoking goes down the payments go down, but that settlement is there [and the payments continue in perpetuity as long as people are smoking the defendants' cigarettes].

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There were a bunch of restrictions on marketing in there, like they couldn't fund NASCAR anymore, they got rid of billboards, with a couple very limited exceptions, things like that. And there was the creation, or they required that all the documents be made public, with a few exceptions about [genuine] attorney-client privilege and a couple other things, for something like twenty-five years. I can't remember the specific date. And they gave several billion dollars to create something [a new independent foundation] which came to be called the American Legacy Foundation, to run a national antismoking program.

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The Legacy Foundation, the first CEO—well, they had an acting CEO for a while, and they created a national Truth campaign modeled on the Florida campaign. [Florida had gone from a Democratic to a Republican governor, and the Republican governor shut the Florida truth campaign down. But they were getting things going. And they ran a very famous ad called "Bodybags," where a bunch of high school students piled up bodybags in front of Philip Morris corporate headquarters in Manhattan, and said, "See what you're doing? You're killing all these people." Philip Morris went totally berserk, threatened to sue Legacy. Legacy pulled the ad.

06-00:26:06

In the meantime, they picked a permanent CEO, a woman named Cheryl Healton, who was an academic from, I believe, Columbia, and worked mostly in AIDS, and didn't have any tobacco experience. Steve Schroeder from UCSF, I think he was chairman of the Legacy board at the time when they hired Cheryl, and he called me up and he said, "She doesn't know much about tobacco but she's really a good person, and you should give her a call and help her get up to speed." So I called Cheryl up. So I called Cheryl up and said, "Hi, I'm Stan Glantz. Steve Schroeder said to call you. And I'm telling you, I am never going to ask you for a penny." Because at that point I was well funded. I had a couple of grants from the NCI, one for policy research in general, one on the documents. We didn't have a training grant yet, but I was sort of fat, dumb, and happy in terms of funding for my research. And I said,

"I want you to listen to me and not have to worry that I am trying to steer you into things to feather my nest." Okay.

06-00:27:47

And so there was a meeting at the Ronald Reagan Library in Simi Valley [California] where Cheryl was speaking, and so I flew down there to get together with her. In the meantime, this ad [Bodybags] had been pulled [by Legacy]. Now, she wasn't yet on the job. It had been announced she's getting the job, but she is not actually on the payroll yet. And I went and met her in her room, and David Kessler, who was then, I think, the Dean at Yale of the Medical School, he was at the meeting. And David and I met with Cheryl in her room, and I said, "Cheryl, you have to put that ad back on the air. I don't care if it's a good ad or a bad ad, but you cannot let the tobacco push the Legacy Foundation around."

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And so my first intense interaction with her was actually telling her that they'd made a big mistake and they needed to do things differently, after telling her, "I don't want any of your money, either." But she's a very strong person who actually appreciates criticism. Most people at that point would have said, "Screw this guy. I'm the boss. He's not. Go away. I don't need to be bothered with you." [But she didn't.]

06-00:29:12

Anyway, so the Legacy Foundation was later renamed the Truth Initiative. They get set up. Cheryl becomes the CEO. In the meantime, the Minnesota Depository that Skip Humphrey had created, and the one in [Guildford] England [that contained the BAT documents that had been produced in discovery in the Minnesota case] also, in a more restricted way, people were starting to go to Minnesota and dig through millions of pages of documents in boxes and copy stuff, and bring it back, and started publishing with it. [Both depositories were nominally open to the public. While the one in Minnesota was easy to visit and obtain copies of material from, the one BAT maintained in Guildford England was very hard to access. BAT severely limited the number of visitors at any one time, made it hard to obtain copies of materials and took months to deliver requested copies.] And so there were several groups that had little collections of documents that they'd made [mostly by obtaining copies from one of the depositories]. And then there was this whole gob [of documents] sitting in Minnesota. And I had established this relationship with the UCSF library with the original Brown & Williamson collection, and so their archivists were working with me—I think at that point it was a woman named Celia White—on how do we deal with all of these disparate collections and bringing this information together.

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And the WHO decided to have a series of meetings about the documents, and what to do with the documents, because this was a totally new thing. There'd never been anything like this before. So the situation we had then was people

were starting to go to the depository in Minnesota, which had been opened by the Minnesota settlement. A few people had been going to the one in England. And you'd go in there. You'd go through boxes of documents, and you'd pay them money, and they would make you copies, and people would take the stuff home and work on it. And so we had these collections of documents among a few research groups around the world, and the question became: what do we do to make this stuff more available in a systematic way?

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And the WHO held a series of meetings on the question of what to do with the Documents, because this is something that had never happened before. And so I sent Celia White and her boss, Robin Chandler [head of Archives and Special Collections], from the UCSF library, to these meetings to see what should happen. And Celia had already created a little committee of people from around the world who were working with the Documents to try to come up with an indexing standard to facilitate sharing documents. And people were thinking if we created some kind of master index you could at least see who had what and then ask them for copies.

06-00:32:10

So the fourth meeting was held in Minnesota in February at the Holiday Inn on the Mississippi River, which was frozen solid. And Robin and Celia said, "You really need to come to this meeting." So it was run by the state archivist of Minnesota [Robert Horton]. And I said, "Okay." So we went there, and it was one of these things where about forty people were there, and they had breakout sessions, and people wrote on butcher block paper on the wall. And what came out the other end is a consensus emerged that really the sensible thing to do was have a single collection somewhere that was accessible on the internet. And this had been a fairly contentious question in the beginning, but just the reality of the available technology and costs and all that other stuff just led to this complete consensus that that should be done, and at the end everybody agreed on that.

06-00:33:13

And then Bob Horton, who was chairing the meeting, said, "Okay, well, what's next? Who's going to do this?" [There was a long pause with dead silence.] So without asking anybody, I said, "We'll do it." And I didn't have any permission to do it. I didn't have any money to do it. I knew the librarians, who were there, wanted to do it, but I didn't know what their boss would think. And we're off and running. And so we were then trying to figure out kind of what to do. So we'd scraped together a little money from a couple of donors, a few thousand dollars, to sort of help get things going, and taking a little money out of one of my grants.

06-00:34:04

So I get a call from Cheryl Healton, and she said, "I'm in town and I'd like to get together, and I've heard you're trying to make the documents available, and I'd like to talk about that." So I said [to myself], "Well, I [told her] would

never ask her for money, but if she offered it I'm not asking, and let's see what she has to say." So she comes by and sits down next to me at a conference table, and she says, "Okay, I don't want to screw around." And she said, "So here's what I had in mind." She takes out a piece of paper, and she writes 2.5, and the next line she writes 0.5, 0.5, 0.5, 0.5. 0.5, and the next line she writes 3, 3, 4. And she said, "Okay, so here's what I have in mind." She said, "I want to give you a $2.5 million capital gift to buy the computers and create a research center built around the documents. I want to give you a one-time, five-year, $2.5 million grant to get everything going and to get a training program going. And then I want to give you a $10 million endowment to keep it going." And she said, "What do you think about that?" And I don't remember what I said, but I do remember what I thought, and it's like, "I need to pee." [laughter]

06-00:35:36

And so I had been hoping that we might get $100,000 out of her, or a couple hundred thousand dollars, and that we were off and running. And she wanted the research center closely aligned with the library, in the library, which was actually something Robin Chandler, who was the head of Archives and Special Collections at the time, also wanted to do, because that was a radical, innovative idea then. Stanford, I believe they have the Martin Luther King papers, and they had created a research center built around them. Berkeley had the Mark Twain papers, and they had created a research center. And she said, "We should have a research center built around these [tobacco] documents." And to this day most people think that getting the Tobacco Center in the library was a space grab on my part, because it's a beautiful space, but it was not my idea; it was Robin's idea. But it just made eminent good sense, and Cheryl had independently had the same idea.

06-00:36:47

And so that's how the Tobacco Center got going, and the money that came in, both the capital gift and the five-year grant, was split fifty/fifty between the library and the Tobacco Center to help cover the cost of creating the collection. And then we obviously worked very closely with the library in terms of designing the [tobacco documents web] site, and what are the usability criteria, and what's important from a user's point of view, and that continues to this day.

06-00:37:24

And there was a little controversy about that. There was a guy named Mike Tacelovsky, who was an independently wealthy tech guy. I think he invented the first workable translation software. But he had gotten interested in all of this and had created a competing collection in his basement near Dupont Circle in Washington, DC just as a rich techie. And he created a pretty good site [tobaccodocuments.org, known as Tobacco Documents Online (TDO), that was online well before UCSF got moving on what became the Legacy Tobacco Documents Library], actually. But we argued, and what Truth or rather Legacy felt, was that having an institution maintaining one collection

like this was a lot more important viable in the long run than a smart guy. But there were efforts to derail the agreement, coming from people who were very hot on Tacelovsky's collection. In the end, by a couple years later, he'd gotten tired of doing it. And we all had the same documents, but he had developed some indexes and technology that were quite good, and he gave all that stuff to the UCSF library in the end [which were important additions to the UCSF collection].

06-00:38:46

And so we thought that this whole thing, it was twenty-five or thirty million pages. It was a lot of stuff. Stuff had been digitized, and the National Association of Attorneys General had it all on digital tape [under the terms of the MSA], and we got the tapes. And nobody thought the collection would keep growing because of a couple of things. One, [going beyond the Minnesota settlement] the MSA said not only did the documents that were available [because of discovery efforts of all the settling states, as well as from Minnesota and the earlier states that settled before Minnesota] at the time of the [multi-state] settlement would be made public, but any documents [produced] in smoking and health litigation for the next many years would be made public. So the collection kept growing. And then in the meantime the Clinton administration decided to bring a racketeering case against the tobacco companies for creating a conspiracy to defraud the public, and they wanted to get the Medicare money [the federal government has spent treating tobacco-induced diseases] back. And that case eventually went to trial and resulted in a 1,600-page ruling in which [except for the Medicaid reimbursement, which the companies got dropped from the case,] the government won. [For details of the trial and surrounding politics, see Eubanks, S. and S. Glantz. *Bad Acts*. APHA Press. 2012.]

06-00:39:54

Now, along the way, the industry succeeded in getting the Medicare reimbursement knocked out, but the other injunctive relief remained, and the ruling, which I think was in 2006, said that documents [produced in smoking and health litigation] would continue to be made available [i.e. made public, which meant that they were available to be could be added to the UCSF collection], and that had been extended a couple of times. And, in fact, the ending of documents becoming available to UCSF as a result of the [federal] RICO [Racketeer Influenced and Corrupt Organizations Act] judgement will happen in September of 2021. So that collection is now around 100 million pages. And also the Justice Department got the industry to agree to give UCSF around $7 million to cover the costs of all this growth in the collection. And the condition on the original Legacy gift was that the collection had to be maintained in perpetuity, freely available to the public. There's no charges to use it; anybody can go access it. And that has really created a foundation [for other new important collections of industry internal documents related to health]. That collection has now grown to include junk food, to include pharma, [the chemical industry, the fossil fuel industry,] and the opioid

litigation. There's I don't know how many so far, but the library has been working with the attorneys general who are suing the opioid industry. I've been a little bit involved in that as kind of an advisor. That collection may end up being even bigger than the tobacco collection. There's stuff on global warming in there [the UCSF Industry Documents Library], the chemical industry.

06-00:41:53

And they're [the other industry collections] all built on the foundation of the Tobacco Documents, but you can either search these collections one at a time or you can search them all at once. And the thing you find is the [many of the] same scientists are in bed with many industries. They're [many of] the same law firms, the same PR firms, similar strategies across industries. So it's really dramatically expanded this whole area of the corporate influences on health. And I think we talked about this before—that if you want to understand malaria you have to understand mosquitos; and if you want to understand cancer and heart disease you have to understand the tobacco industry. And that same view of these corporations as disease vectors—when I first said things like that it was wildly controversial, but now it's just accepted. And, in fact, the library has been working with a group of people all over the world right now to train them on how to use the food documents in research and advocacy in their home countries.

06-00:43:17

Burnett: Well, just to be clear, the master settlement is '98, the creation of the Legacy Foundation, and then you mentioned this fourth meeting in February. Was that February of '99, or is it—

06-00:43:34

Glantz: You know—

06-00:43:40

Burnett: It's certainly four meetings in.

06-00:43:42

Glantz: Probably. Yeah, probably, yeah.

06-00:43:44

Burnett: Okay. But we can verify that later.

06-00:43:47

Glantz: Yeah, the library could tell you. But the Legacy Foundation wasn't at that meeting, or I don't think they were. Maybe they were. But it was mostly people who were actually using the documents.

06-00:44:02

Burnett: Okay. So these documents are hot from a number of perspectives, and this has been risky work. It's been controversial work. Can you talk to me about security and insurance, the protection of the information, the protection of the people at the Tobacco Center? Can you talk about how did you structure the

Tobacco Center to insulate it from—? Well, let me ask it another way: the degree of support from the institution UCSF, for example, the broader institution, and to the extent that the UC has been exposed in the past to political pressure from senators and governors, can you talk about how that past informed how you structured the Tobacco Center?

06-00:45:01
Glantz: Well, it didn't really affect it at all. I mean, one of the amazing things was through this whole process the University was just very, very supportive. I mean, I don't know if I told this story but did I talk about when the word got out that the documents were at UCSF?

06-00:45:21
Burnett: Yeah.

06-00:45:21
Glantz: Okay, and the University said, "This is what the university's for." And years later I remember having a meeting with the Medical School dean at the time, Haile Debas, and it was at the end of the day, and it had nothing to do with any of this; it was about some other programmatic stuff. And we're walking out of his office to go home, and he put his arm around me, and he said, "Stan, I've just got to say I'm just amazed and proud that the administration stood behind you in all this tobacco stuff." And I remember thinking, you *are* the administration. [laughter] But the University, for whatever reason, just was never questioning of the value of this. And the fact that we had this major institution standing behind the work, I think it made a big difference. And it wasn't on an hourly basis, but there were times that we were challenged or that issues came up, and the Office of General Counsel and the President's Office and the Office of Legal Affairs at UCSF, we were not shy about consulting with them to make sure we didn't screw anything up. And if I was dealing with a paper which I thought was hot, I would ask them to review it. They never tried to censor it. I mean, there were times that they came back and said, "This is not a good way to say something," or, "We'd like to see the evidence that this is true," or, "We want you to sharpen the language to be more precise so it's more defendable." But that was great.

06-00:47:19
Burnett: So I keep thinking about the fact that there's no Department of Public Health at UCSF, and your long history of interdisciplinary, multidisciplinary work, so there was no problem with buy-in, or—so did you have an advisory board, for example, for the Tobacco Center?

06-00:47:46
Glantz: Well, yeah, one of the things Legacy wanted was an advisory board, and we have an external advisory board. It's a mixture of local people and people from around the country, and it's a mixture of academics, library people, and advocates. And it meets once a year, and we prepare a big, thick [briefing] binder [for them to read before the meeting]. I hate going to meetings and

having death by PowerPoint. It's like, why would I travel all the way across the [country to just sit through presentations I could read a lot faster]? Because I've been on a lot of these committees. You fly across the country and then you spend the whole day watching PowerPoints, and it's like, why did we do this? So we spent usually about two months putting the briefing book together for the [external advisory] committee, and we would expect them to read it, and when we had the meeting I told people [the UCSF faculty presenters], "You can have a couple, three slides, or five slides, to kind of remind people what the questions are, but then we want to have the committee talk, and we want to get advice from them." And that committee has been great over the years, and we've gotten a lot of really good advice. And we have leading academics in the area on it. We have Sharon Eubanks, who won the Department of Justice lawsuit. We have John Ferguson, who was the attorney who was pissed off that Christine Gregoire didn't let him take the case to trial, and he was also a former spy for the CIA, so he has a kind of interesting perspective. [laughter] Bob Horton was on there as the State Archivist of Minnesota, and he's at the Smithsonian now, but he's back on the committee. Steve Schroeder from UCSF; Robert Hyatt, who's the Associate Director of the Cancer Center for Population Sciences, chairs it. And it's a great meeting every year. The level of activity has expanded so much it's gotten kind of jammed, but—

06-00:50:01

Burnett: Right. Can you talk a little bit about the administrative structure of the Tobacco Center? How does it function? What's the model?

06-00:50:11

Glantz: Well, by then I'd had a lot of experience with budget stuff. I knew all about overhead, where the departments get screwed. When the university negotiates the overhead rate, there's a certain amount of money that goes to the departments for management of grants and stuff, but that money doesn't usually trickle down. It all gets raked off at the President's Office, the Chancellor, the Dean. And so I didn't really want to be a department or an organized research unit, which is like a department but for just research. And also there was a lot of angst in certain quarters about, well, [faculty who worried whether] am I trying to grab people's grants. As I said, we had by then a fairly substantial group of faculty working in tobacco, most of whom were totally delightful, [but] a few of whom were paranoid, and grabby. And, A, I didn't want the aggravation of managing the grants, the fiscal aspects and personnel aspects that a department or an ORU [organized research unit] would do; and B, I didn't want to have to deal with the politics of it.

06-00:51:34

So I created the Tobacco Center as what's called a non-ORU center. I wanted it to be a formal academic unit. Anybody at any university could declare themselves a center and put a sign on the door, but it has no standing in terms of the institution, and I wanted institutional standing. And there's this big, thick, boring [official university] document called the Compendium, which is

all the rules for all creation and dissolution of academic programs, and I was familiar with the Compendium from having set up the bioengineering program. And so I looked through there, and lo and behold there's something called the non-ORU center, so we could get the whole formal administrative review, Academic Senate review, be an actual academic unit, but have somebody else responsible for all of the grants management and personnel stuff.

06-00:52:42

So I went to the Cardiovascular Research Institute, which I was part of, and said, "Would you guys be willing to be the administrative home for the Tobacco Center?" So they handle all of that administrative stuff. But the Center itself is its own thing. And what I said to people about grants, which is what several people were paranoid about, is, "I don't want your grants. You can keep them in whatever department you want. What I want is your attention, and what I want you to be doing is participating in building a collaborative environment and a training program." As I talked about before, the whole bioengineering program was built around the training program, and I did that again in building the Tobacco Center. It was all built around the postdocs, because as I had learned from Ted Lewis at Berkeley when we did the bioengineering program, that if faculty have to pay attention to students, or, in this case postdocs, they'll make the time to do it, because they care about that. And also, I think training is tremendously important. It's way more important in the long run than any individual research finding that anybody has. If you can expand the field, if you can create a cadre of well-trained people with the right attitudes, who kind of keep in touch with each other, you can have a way bigger impact in the end than any single—I mean, I've done some very high-impact projects, but I think that by far and away the most important thing I've done is trained a bunch of people, and helped launch their careers.

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And so that was the model I used, and it's been immensely successful. We have a very active Fellowship Committee that selects and supervises the fellows, and that really built a set of deeper connections between the faculty, which led to the Center, the whole being more than the sum of its parts. And so that was the approach that I took, and I think it was the right decision. It meant we could focus our energies on getting work done, and not have to worry about who's going to pay for the accountants. We didn't have to use our limited space to house—there were eighteen cubicles in the Tobacco Center, I think, and we would have had to use two or three just for HR and accounting, and that was somewhere else. And I didn't have to supervise that. It wasn't that we didn't work with them, obviously, but—so that's how I set the Tobacco Center up the way I did. And most people thought I was crazy. They said, "Why don't you set this up as a full organized research unit, because you'll get the overhead?" And it's like, hey, I know about overhead. I don't want the overhead, you know.

06-00:56:14
Burnett: Yeah, it's a kind of trap in the end.

06-00:56:16
Glantz: It is. It is. And my goal always was the work, not the money.

06-00:56:21
Burnett: Right. Well, you mentioned setting up a structure of mentoring and training, and teaching is also a part of the mission. It is teaching, research, administrative service. Can you talk a little bit about teaching? Because I can rattle off for you, because I went through and there's an awful lot of guest lecturing. There's an awful lot of standard teaching. First, in your career, earlier on, it's biostatistics, computing, advanced calculus, differential equations, special courses on that. And we've talked about that already. Then, later, it gets into guest lectures in political science, nursing, otolaryngology, thoracic oncology, and also the nature of careers in science. So I'm wondering if you could talk a little bit about the teaching-slash-mentoring across all of these disciplinary areas. Is that people that you know asking you to guest lecture? Partly that, and then also kind of what I would call almost meta-teaching, not teaching about teaching but teaching about the career of the scientist.

06-00:57:37
Glantz: Yeah, no, I know exactly—yeah, that's very important. So, all those individual lectures were things I got asked to do. I wasn't out saying to somebody—

06-00:57:48
Burnett: Proselytizing, or—[laughs]

06-00:57:49
Glantz: Proselytizing. People would call me up and say, "Could you do this?" The way the statistics got going, if I could just talk about that for a bit before getting into the sort of broader issues, statistics at UCSF—well, first of all, I had very little background in statistics. I had taken one crappy undergraduate course when I was an engineering student, but when I was a postdoc at Stanford in cardiology, people think if you know about math you're a statistician, and I didn't know anything much about statistics, but what kept happening is I'm sitting there in the Division of Cardiology. I'm the only PhD fellow in the Division of Cardiology at Stanford. Everybody kept coming to me for statistical help. And I felt like, well, I want to be useful, and these are kind of interesting questions, so I taught myself statistics, biostatistics. And then when I came to UCSF, the same thing happened, because there was—I won't say there wasn't any statistical capacity at UCSF, but it was very, very limited. There were a couple of people down in the basement who you could pay money to who would consult with you. There were random people scattered around who knew the stuff, but it was totally disorganized. And so a lot of people were coming to me for statistical help when I was a fellow. And I remember going in to [Bill] Parmley [Chief of Cardiology and my mentor] and saying, "Is this a waste of time? Because I'm not getting my name on

papers." I mean, I could have. I could have said, "I want my name on the paper," but I always felt like you shouldn't put your name on papers unless it is your paper, or you made a really substantial contribution and not just helped somebody out a little bit. And he said, "Yeah, it's a good thing to do, because everybody has funding lapses, and everybody has rough spots, and when you hit a rough spot if there's a whole lot of people around who think it's really great that Stan Glantz is here, he's a really nice guy, he's really helped us out, that's going to make the Department more willing to come up with the resources to carry you over that rough spot than if you're just sitting there doing your own thing."

06-01:00:20

And I've done exceptionally well in terms of funding. I mean, it's shocking how well I've done, but I've had lapses. And, in fact, when I came there, as I think I talked about earlier, there was already an existing lab set up to do the animal research. And the guy who ran it, who's a brilliant scientist, had some funding problems, and ended up sort of being suggested he find another job, which he did. He ended up a department chair somewhere else, and ended up a great move for him. But I remember asking Holly Smith, who was the Chair of the Department of Medicine years later, "How come you took care of me but not this other guy?" I mean, they didn't throw him out the next day; they gave him a while. And he said, "Everybody at UCSF is a brilliant scientist, but you've done things that go beyond your own personal work, and contributed to the Department more broadly, and he was really focused on his work. And I have very limited discretionary resources, and that's why you got some." And I think that's a very, very important lesson.

06-01:01:38

So I ended up starting to teach biostatistics through sort of informal courses, and then for the medical students I got asked to put some teaching notes together on very short notice, in about six weeks. And I actually didn't do the lecturing—somebody else did the lecturing—but I put the materials together, and that turned into the book *Primer of Biostatistics*, which has been immensely successful. It's gone through seven editions. It's been translated into eight or ten languages. And, in fact, I've gotten big national awards from national organizations for my tobacco work, and a couple of times people said, "Well, Stan Glantz is getting this award for all of his antismoking stuff, but I want you to know I read his textbook, *Primer of Biostatistics*, and I can actually understand it." So I describe that book as the first English-language statistics text. [laughter]

06-01:02:46

But the teaching of statistics back then was a catastrophe at UCSF. There was no organization to it. A few people were doing it out of the goodness of their heart, but the courses were taught whenever somebody felt like teaching them. There was no integration, no coordination. But so I went to the administration, to the provost or whatever he was called [Vice Chancellor for Academic Affairs David Ramsay], the chief academic officer, and said, "This is terrible.

We need to have some structure here. Can I have some money?" And so I created the biostatistics teaching group, and we got half a dozen people who were doing all these random courses together, and we came up with a structure, and we actually started paying people to teach these courses so we could have a little accountability. And that was how biostatistics got organized at UCSF, and that's now a big division within the Department of Epidemiology and Bio—back then it was the Department of Epidemiology; now it's Epidemiology and Biostatistics. So that was a larger contribution I made to teaching.

06-01:04:03

Now, another thing that was, I think, very important in my career when I was a fellow at UCSF is the guy who had created the Cardiovascular Research Institute was a guy named Julius Comroe, who was a very famous pulmonologist, and he had already retired by the time I got there, but he taught a ten-lecture sequence on how to survive as a junior faculty member, which was probably the ten most valuable hours in terms of career development I ever spent. It was things like what is the academic procedures manual, what are the different kinds of appointments, FTEs, and—

06-01:04:53

Burnett: You had described that in an earlier session, actually.

06-01:04:55

Glantz: Okay, so I don't need to go through that. Well, so that made a big difference in my life, and so I actually developed—it wasn't exactly the same as Comroe's course, but very similar, and did it for the postdocs in the Tobacco Center. And I did that up until I retired. And that's been taken up by someone else now, but it's like, how do you negotiate a job? What are your priorities? What do these different kinds of appointments mean? What's worth fighting about? What's not? And then that got me invited to give similar talks in other programs.

06-01:05:41

Burnett: Right, right. But it's baked into your understanding of—just as the objects of research are contextual, right, you have to understand it's not just the person smoking; it's what are the drivers, what are the cultural and social and institutional and industrial drivers of that cigarette smoking activity.

06-01:06:03

Glantz: Right.

06-01:06:04

Burnett: You're also thinking about the larger context of the tobacco researcher, and the young student who wants to get a job. What are the institutional constraints, opportunities, and so on? And so you were watching that, and you cared about that with respect to your students. You wanted them to be successful, and in order to do so they needed to know the context.

06-01:06:26

Glantz: Right, and if you go back I talk about Bud Henderson at NASA, when I was a student trainee, and he had a big effect on me. And as I think I told you, he told us, "You're not getting paid enough money to do somebody else's scutwork." And I used to tell the fellows about Bud Henderson, and say, "You know, you're here as a postdoc. You're making a small fraction of what you could make if you went out into the real world in a sort of for-profit kind of job, and we owe it to you to make it worth your time to do this, to move your career along in directions that are important to you." And the system is very finely tuned to screw young people. It really is. And to get people to understand that—I'd been told there's no difference between an adjunct and an in residence appointment, when I said, "Yes, there is. I read the academic procedures manual, because Julius Comroe told me to." [laughter]

06-01:07:30

And one of the other things I did, which doesn't appear on the CV, is fellows, including fellows who never worked with me directly, routinely would come to me for advice on how to negotiate a job. And when do you bring what up? And what's worth pushing for? What's not? And part of that is personal values clarification, but what I tell people—and this is what I had learned—is that up until you're going for your first real job, you're always thinking in the short term. Where am I going to go to college? Where am I going to go graduate school or medical school? Where am I going to be a fellow? So it's all in chunks of a few years.

06-01:08:23

Well, when you go move into your first professional position, people may move on, but a lot of people end up staying where they first start, and so making sure you're getting into a position that is appropriate for you and that has long-term potential to let you do what you want is really, really, really important. And I think I talked about that for me. And I think one of the real contributions I've made to a lot of people is making sure they understood that.

06-01:09:02

And I still to this day every once in a while get phone calls or emails from former tobacco fellows, wanting career advice, which I think is great. It makes me feel old, especially since a bunch of them—one of them ended up the Provost at Washington State [University]. I have a whole ton of people, a couple department chairs, and [another] one of them just made full professor recently, and—

06-01:09:31

Burnett: Of course, academia is a job, but it is different from other kinds of professions. It was explicitly in terms of colleges this in loco parentis, if you're talking about undergraduates, but when you're talking about career-long relationships there is something kind of not parental but maybe avuncular about it. [laughs]

06-01:09:59

Glantz: Well, if you put yourself in the department's position, the incentives on them is to minimize the commitments they're making. And I would be the same way, probably. It's like, hey, the less I can commit to anybody, the more flexibility I have in the future. So it's not that they're necessarily being evil, although there are places where they are evil. But you have a need to be sure that you're protecting your own interests in those negotiations. And the interesting thing—and this was my personal experience, and what I've seen with a lot of others—is people are very reluctant to stand up for themselves in that situation, but when people do it, the people they're negotiating with are actually pretty impressed. I mean, I've had several fellows say, "Gee, they asked me how did I know that, or that these appointments are different, or what the differences are." And then they respect them for it. It's like, oh, this is somebody I have to take seriously. But at the same time, you've got to be realistic, and when you're in a negotiation you don't usually get every single thing you want, so you've got to figure out what are the important things. And there are also times when the institution, you can ask but it's something they don't control. I tell people the benefits package, the department has no control over that, so I wouldn't bother. I know you'd like to get this other thing, but forget it.

06-01:11:45

Burnett: Well, maybe we can return, then, to talking about the Tobacco Center, and post-settlement. And one of the things I was—

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Glantz: I guess, could I just—?

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Burnett: Sure, of course.

06-01:11:56

Glantz: In terms of teaching there's two other things, and you mentioned that there's no public health school at UCSF. Given the success I had with bioengineering and with biostatistics, the dean at the time, which is Julie Krevans, actually asked me to make two other attempts to get things organized, neither of which went anywhere. One of them was there was a medical information sciences group at UCSF, very small. And he said, "Well, you have all these contacts at Berkeley now. Could you try to work with them to replicate what you did in bioengineering? Because we're never going to have the resources to make that big," although today it's actually pretty big in modern computational biology, but this was years and years and years ago.

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And so I made a try at that, but the people involved here just didn't want to play. They were looking inward. They complained a lot that they didn't get enough resources, but I said, "Look, if you can come up with a broader plan, the dean says he'll give you money." But it didn't work. And this is, again, now more organized than it used to be, but there was a sort of smattering of

social sciences people all over the place, and they were also complaining that nobody cared about them, and they didn't have any resources. And I worked with a lot of these people, and the dean said, "Could you try to get them to come together with some kind of plan, and I'm willing to put some resources behind it." But it was just your typical academic, never-have-so-many-fought-so-hard-for-so-little thing, and they would get into these, seen from the outside, ridiculous arguments about methodological approaches and all of that. And I remember saying to them, "Look, these differences may be really important to you, but if you're talking to a neurosurgeon they don't think it matters, and why don't you guys get together and the dean will give you resources to become something more?" And finally after a while I went back to the dean and said, "They just don't want to do it." And he said, "All right."

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There is more public health activity at UCSF than Berkeley, and this has been one of my great frustrations there is there had been several attempts to get that organized, but they just never got it together. And, in fact, one thing I learned, having been on a ton of committees about this, is when they created the Public Health School at Berkeley back in the forties, I think, there's actually kind of a hook to UCSF in that. And so if UCSF wanted to create a public health entity, actually, all of the approvals up through the Regents in the State of California already took place [for it to be done under the existing charter for the School of Public Health at Berkeley]. It's there. But in trying to get people to say, "Look, we have the vessel. All we have to do is flip the switch and turn this on, and it could create the same kind of integrated structure that we've been so successful with bioengineering and with the Tobacco Center. Why don't we do that?" But the problem is everybody was just too worried about their own [situations], "But I'm on soft money, and I don't know if I have time to do this, and I've made myself a home somewhere, and I don't want to rock the boat." And I'd say, "Look, you can make use of this structure without rocking your current boat if you do it right," but after a while it was like, been there done that.

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And I still, to this day, think it was a gigantic mistake to not activate that. They've created a Global Health Sciences program, kind of in lieu of that, but it's a small fraction of what it could be if the larger—I mean, I think if the public health activities at UCSF today got integrated, it would swamp Berkeley [snaps] like that.

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Burnett: Probably.

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Glantz: Oh, yeah. If you just look at the total number of people at the total level of grant funding and activity, it's way bigger here. And it would mean a bigger commitment to teaching, but that's a good thing, I think.

06-01:16:53
Burnett: As you've mentioned, the importance of training, and making the Tobacco Center about training, for example, and the early and deep engagement with the AIDS pandemic is one of the other major areas, and that's where the Global Health Sciences thing becomes—so much of that is AIDS and pandemic-focused, right?

06-01:17:16
Glantz: Right.

06-01:17:16
Burnett: And so it's readymade human capital, but it's because of the way UCSF has been historically, it's required these emergencies, right? There are these public health emergencies. That's where public health comes from. It comes from epidemics and pandemics, creating a crisis reaction that then becomes institutionalized. But it's truly the case that you have that at UCSF: the tobacco pandemic, right—

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Glantz: Yeah, sure.

06-01:17:52
Burnett: —and AIDS. And maybe there are others that you know of that are—sugar, for example.

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Glantz: Right, sugar, junk food is another one. But, see, the other thing is about—oh, gee—five or eight years ago there was a high-level meeting at the UN, which is all heads of state get together, and they issued a proclamation on noncommunicable diseases, saying noncommunicable diseases are going to be the dominant health issue in the twenty-first century. And they've had another meeting since then where they reinforced that. And I went to the global health people and said, "The Tobacco Center is a WHO collaborating center on tobacco. There's a lot of global tobacco work being done at UCSF already. And this needs to be better integrated into global health sciences." It was very frustrating. And it's a little bit more there than it used to be, but the leadership, they're so into infectious disease—like, I was at a meeting with them, and the Gates Foundation came down, and they wanted to see more on mothers and infants and infant mortality and stuff. Well, the leading cause of infant mortality is smoking by mothers, or I don't know if it's the leading cause, but it's a really big deal, and they're just like, "We don't care." And in the last few years, the Cancer Center has created a global cancer program within the Cancer Center, and they've been very interested in tobacco, and we've had a couple of our fellows involved with them. Some of the research has been done jointly. But, to me, that's been a great source of frustration is that the Global Health Sciences wasn't more interested in not just tobacco but noncommunicable disease in general.

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Burnett: Right. And I don't think we've talked in detail about—you've mentioned it before—the Framework Convention, 2003. Can you talk a little bit about your role with respect to that, perhaps indirectly? Or direct, I don't know.

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Glantz: Well, yeah, the [WHO] Framework Convention on Tobacco Control, it's a framework convention on tobacco control, and it outlines—a framework convention creates a framework for international regulation. It's like the Framework Convention on Climate Change. And then they have a meeting every couple of years called the Conference of Parties—they've had eight of them so far—where they flesh out what are you actually going to do. And the Framework Convention is very comprehensive. It covers advertising. It covers taxation. It covers clean indoor air. It covers smuggling and illicit sales, health warning labels, cessation services, surveillance and monitoring, and there are other things I'm not thinking of.

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And I have to say I was very skeptical. Actually, the idea for it came from a woman named Ruth Roemer, who was a public health professor at UCLA. And when it first came up I thought it was just a crazy idea, because my experience, as we talked about before, has been the further away you get from the grassroots, the less powerful the public health is and the more powerful the bad guys are. And I thought going to an international forum, the chances of completely getting screwed by the tobacco industry were so high that it just wasn't worth the trouble.

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So I didn't have too much to do with it. I was sort of sitting on the side being skeptical. But a couple of things proved me wrong. The first was the Director General of the WHO at the time, a woman named Gro Harlem Brundtland, who was a former Prime Minister of Norway, was really committed on the tobacco issue. Norway has been a leader in tobacco control, going back decades, and she really wanted to do something, and provided very strong leadership.

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Another thing that was very important were the documents, because the documents had come out, and we and some people separately at the Mayo Clinic had written a couple of papers out of the documents about tobacco industry efforts to undermine the WHO and to infiltrate the WHO. And those really pissed off Brundtland, and she ended up commissioning a high-level committee of health ministers and things like that to look into the documents, and they learned even more about how the industry had been trying to secretly burrow into the WHO and its various agencies and undermine its activities.

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And that led to a really groundbreaking article in the Framework Convention called Article 5.3, which basically says corporate interests should not be

allowed to undermine public health. It's the only time that's ever been done. And its implementation has been mixed, but there are many countries which have used that to keep the tobacco industry out of—I mean, they can participate in the policymaking process as citizens, but to keep them off committees and out of the formal decision-making process, and to keep them at arm's length.

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That was one thing, and then the second thing was the public health community really got its act together, and they created something called the Framework Convention Alliance, which is an NGO of NGOs from around the world. And they raised enough money to help bring representatives from these poor countries to the meetings, and at these meetings some little island nation out in the middle of the Pacific gets one vote, as does the United States, or Russia, or China, or England, which were problematic countries in the negotiations. And those two things, I think, together made a huge difference. [See Mamudu, H. M. and S. A. Glantz. "Civil society and the negotiation of the Framework Convention on Tobacco Control." *Glob Public Health* 4, no. 2 (2009): 150–68. Doi: 10.1080/17441690802095355. PMID: 19333806; PMCID: PMC2664518.]

06-01:25:10

And another thing which I think made a big difference was the war in Iraq. Because I happened to be in Geneva for a meeting with the WHO about my smoking in the movies campaign at the same time as the sixth and last negotiating session for the FCTC. And, in fact, I managed to wrangle myself a blue badge so I could actually go into the negotiations, and I'll tell you, if you like watching water [slowly] drip—it was fascinating, but I could never be a diplomat. It's just like, ugh, everything moves so slowly, and it's like changing a comma to a semicolon. But that matters sometimes. When you're writing a treaty, grammar really matters. [laughter] And that happened right during the run-up to the Iraq War. And there were demonstrations around the world to try to prevent Bush from invading Iraq. There was very strong feeling, and Bush was sort of openly giving the finger to the rest of the world. And I think that really diminished the ability of the United States to derail the treaty, which it was desperately trying to do.

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And then the other thing that happened at the time is it came out, a memo somehow got leaked—or not a memo, a cable—I think it was [from the United States] to the Saudi Embassy, asking them to go put pressure on other countries to stop the treaty, or to get it severely weakened.

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Burnett: The tobacco treaty, yeah.

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Glantz: Yeah, and people really reacted negatively to that. And I had an opportunity to meet with Brundtland when I was there, because I kind of hung around after the movie stuff to see what was going on with the negotiations, because I'd never been there before. And she met with me, and then separately with several other kind of key US leaders, saying, "What can we do to get the United States in the treaty?" Because the United States was being very difficult. And I said, "You don't want them." Because the way these framework conventions work is the thing that really matters are the implementing guidelines, which are passed later, and those are all done by consensus [among the parties], so if you have one country out of 180 or so that are parties objecting, it stops everything. And I said, "The United States doesn't really care about international treaties that much. The State Department hates them. I think the chances of getting anything through the Senate at that time with Jesse Helms still there from North Carolina, or just in general, is very low." And I said, "You don't want them as parties because they'll just get in the way, so just to hell with them." And, apparently I wasn't the only person who told her that, and in the end they gave up on making the United States happy, and I think the result was a much stronger treaty.

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And I've never been to any of the Conferences of the Parties, because they were always in the fall, which is when I did most of my teaching, but I would always go in there expecting it not to work out very well, and in the end it always worked out way better than I thought [it would]. And I thought while the US was there as an observer, they didn't have a vote. And since then, we've done a lot of research on the origins of the treaty, used the documents to study how the industry was trying to undermine the negotiations, and later undermine the treaty, and also statistical research on the efficacy of the treaty. And you know, I was wrong for being so skeptical. It's worked amazingly well. The treaty had a statistically detectable impact on the passage of implementation policies, and also tobacco consumption globally, after increasing for a hundred years, peaked. [1: Hiilamo, H. and S. Glantz. "Global Implementation of Tobacco Demand Reduction Measures Specified in Framework Convention on Tobacco Control." *Nicotine Tob Res* 24, no. 4 (March 1, 2022): 503–510. Doi: 10.1093/ntr/ntab216. PMID: 34661672; PMCID: PMC8887591. 2: Hiilamo, H. and S. Glantz. "Limited implementation of the framework convention on tobacco control's tobacco tax provision: global comparison." *BMJ Open* 8, no. 10 (October 2, 2018): e021340. Doi: 10.1136/bmjopen-2017-021340. PMID: 30282678; PMCID: PMC6169655. 3: Hiilamo, H. and S. Glantz. "FCTC followed by accelerated implementation of tobacco advertising bans." *Tob Control* 26, no. 4 (July 2017): 428–433. Doi:10.1136/tobaccocontrol-2016-053007. Epub July 28, 2016. PMID: 27471111; PMCID: PMC5274612. 4: Uang, R., H. Hiilamo, and S. A. Glantz. "Accelerated Adoption of Smoke-Free Laws After Ratification of the World Health Organization Framework Convention on Tobacco Control." *Am J Public Health* 106, no. 1 (January 2016): 166–71. Doi:

10.2105/AJPH.2015.302872. Epub November 12, 2015. PMID: 26562125; PMCID: PMC4689638. 5: Sanders-Jackson, A. N., A. V. Song, H. Hiilamo, and S. A. Glantz. "Effect of the Framework Convention on Tobacco Control and voluntary industry health warning labels on passage of mandated cigarette warning labels from 1965 to 2012: transition probability and event history analyses." *Am J Public Health* 103, no. 11 (November 2013): 2041–7. Doi: 10.2105/AJPH.2013.301324. Epub September 12, 2013. PMID: 24028248; PMCID: PMC3795937.]

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And there's huge challenges now because of e-cigarettes and these other new products. In fact, WHO just put a report out on that yesterday. But it's [the FCTC] just worked amazingly well. And what it did to these little countries that don't have the same kind of infrastructure that the United States and the really rich countries have, it sort of set a set of standards, and before it was like crazy antismoking zealots were saying you should have graphic warning labels on cigarette packs, or increase tobacco taxes, or protect people from secondhand smoke, and the industry would come in, and the International Chamber of Commerce would come in and say, "Oh, this is going to destroy business; it's against freedom; and blah, blah, blah." But then you could say, "No, we signed a treaty obligating ourselves to implement policies to deal with this," and it's made a gigantic difference.

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And we've looked at the implementation of the FCTC in several middle-income and low-income countries, and the legitimacy that it's given to the public health side in the negotiations, as well as the access to technical resources from the WHO and others, has just been a game changer. And then also Michael Bloomberg has put a lot of money into supporting the implementation of the FCTC, and that's made a gigantic difference, and we've written about that, too. When he started out, it was a little bit like, "I'm Michael Bloomberg and you're not, and every place is New York, and you need to do what we did," and that pissed a lot of people off, and it failed a lot, but one of the things we learned in running ANR [Americans for Nonsmokers' Rights] was you need to meet people where they are, and then say, "Okay, we agree on where you want to get. Here's what we know. How can we help you?" And now that's much more the attitude coming out of the Bloomberg group, and when they started being more sensitive to these local conditions—which, in the end, aren't that different from place to place—they became way more successful.

06-01:32:09

Burnett: I think there's maybe a segue into a small area that is worth talking about, which is from 2000 on, this Local Ordinance Tracking Database Committee, which is part of Americans for Nonsmokers' Rights, which you just alluded to. Can you tell us that story?

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Glantz: Sure. Well, back when I was president of then it was CNR, Californians for Nonsmokers' Rights, as I think I told you, in the first year we got one ordinance passed in Ukiah [California], and the second year we got three; it was San Diego and two other places. And so this is sort of slowly spreading, and the tobacco industry pretty much did the same thing everywhere, and made the same arguments: that the economy would be destroyed, and that freedom would be destroyed, and there would be chaos in the streets. And I said to the staff, we should start keeping a database of these ordinances so that when you go into the next city, or they contact you, or the next county, you can go find a similar place that has actually passed an ordinance, and then put politicians in the new place in touch with the politicians in the old place, because they will have way more credibility with the politicians in the new place than you will, or I will, because we're public health crazies.

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And so the original origin of that database was as an advocacy tool to just connect people, and say, "Here, don't believe us. Talk to the mayor of Ukiah. He can tell you what he was afraid would happen, and what actually happened," and on it goes. Well, over the years that has grown to a very, very detailed database of, I don't know, probably hundreds or thousands of laws around the country, with very detailed characterizations of the laws. And that's become a hugely valuable research resource. And the NCI, I don't know if they're still funding it but they were funding it. The NCI published a whole research monograph on that database a few years ago [National Cancer Institute. State and Local Legislative Action to Reduce Tobacco Use. Tobacco Control Monograph No. 11. Bethesda, MD: US Department of Health and Human Services, National Institutes of Health, National Cancer Institute. NIH Pub. No. 00-4804, August 2000], and what's in it. And I can tell you we've done several papers where we've linked the ANR database to health records and shown that the passage of ordinances was associated with less youth smoking, or fewer—I don't think we've ever used it to look at heart attacks, but other people have.

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And so, in addition to the political function that it was created to serve, and which it still serves, it's become a hugely important research resource. And we've done a few papers using it, linking it, but there are many, many more done by other places.

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Burnett: And later, from around 2013 or so, there's a Tobacco Center of Regulatory Science. Can you talk a little bit about how that—

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Glantz: Oh, okay. Well, so what happened when the FDA finally got authority to regulate tobacco, which I was very skeptical about that, too [Glantz, S. A., R. Barnes, and S. Y. Eubanks. "Compromise or capitulation? US Food and Drug

Administration jurisdiction over tobacco products." *PLoS Med* 6, no. 7 (July 2009): e1000118. Doi: 10.1371/journal.pmed.1000118. Epub July 28, 2009. PMID: 19636359; PMCID: PMC2709428], and that's a place where I think I turned out to be right because they haven't done much—I mean, they've funded a lot of good research; they've run some good educational campaigns; but if you look at the actual regulations they've issued of tobacco products, so far it's been kind of a bust. But what they did, which I thought was very smart, was rather than creating their own—I mean, they have their own internal research, but instead of creating their own extramural research program is they entered into an interagency agreement with the NIH to manage their extramural research. So if you want to apply for FDA money to do tobacco research, you actually send a grant to NIH.

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And they started out funding kind of standard investigator-initiated stuff, with some restrictions [on topics], because there are limitations on what the FDA can legally fund. But then they came up with the idea of creating research centers, and they are called Tobacco Center of Regulatory Science, or TCORS. And they put out an RFP inviting universities, or—well, it didn't have to be university—any eligible institution, to apply to be at TCORS. You had to have several projects. You had to have an integrating theme. And it was $20 million a year over five years, so $4 million a year, counting indirect costs. So it's about $2.5 or $3 million in direct costs, so it's a big grant.

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So I looked at this, and I thought, well, that's great that they're doing that. I, at this point, have two RO1s from NIH. I had money from my smoke-free movies project. I had another project about smoking in restaurants, which I can't remember if that was over or not yet. And we had the training program. And I'm fat, dumb, and happy, and what do I need the aggravation of running a big center grant, which is a lot of work?

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And so I got a call from a colleague at NIH saying, "Have you seen this opportunity? Are you going to apply for it?" I said, "No. It just sounds like a big pain in the ass, and what do I need it for?" And she said, "UCSF cannot not apply. This is too important. These things are the centerpiece of the FDA's extramural research program, and they're going to create other opportunities for interactions with the government, and probably other administrative supplements and other kind of funding opportunities, and you have to apply." And I was like, "Eh, I don't want to be bothered." But enough people leaned on me.

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Well, then I went around and tried to get somebody else to be the PI, and I won't mention any names but they're kind of obvious leaders at UCSF. And I said, "Here's your chance to be the PI of a giant grant, and I'm happy to help out." And all of them said, "No, you're doing this. You're the Director of the

Tobacco Center. You're the guy with a foot both in the basic sciences and policy stuff. You have to do this." And so finally I relented. I mean, it was a gigantic amount of work to pull it together. It had five major projects, plus a training component, plus a couple of cores—a statistical core, a lab core, administrative core, I think there was one other. The whole application was this thick [several inches], [500 pages single-spaced] printed on both sides.

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But I'm glad I got my arm twisted into doing it, because, first of all, I came at this from my kind of established "let's be interdisciplinary" point of view. So if you look at the other TCORSs that were funded in the first round, fourteen were funded. They're each around a very narrow theme, like advertising, or nicotine addiction, or heart disease. And we ran the gamut all the way from basic science and lungs all the way through economics. And it was a little bit of a struggle to show how all of these things were integrated, because you had to have an integrated theme, but all the years of all these people working together on the Fellowship Committee and other things in the Tobacco Center, we pulled it off, and it ended up the most influential and the most productive of all the TCORS.

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And then came up for renewal, and they cut the funding to nine [centers] because they had less money, but we made it in the renewal. And, A, we've had a big impact on the field generally, and one of the things we did, which a few of the others have done a little bit of but nothing like what we did. In the rule-making process, there's something called public comment where the agency proposes a rule and then the public gets to comment, and tobacco companies have scads of lawyers and pet scientists and so they overwhelm the [FDA] Agency. And this is true generally. And we'll talk later about my service on the Scientific Review Panel on Toxic Air Contaminants, but it has a public comment process, too. So I was looking at it as a recipient of comments, and one thing that always impressed me was how rarely the health groups or environmental groups commented on any of these risk assessments we were looking at, and it's like, this is a great opportunity, and if you don't hear from the health groups the agency's under a lot of pressure to listen to industry, because there's something called the Administrative Procedures Act that governs all this.

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So we ended up putting in a huge number of public comments, like twenty or fifty or something a year, depending. And the thing about that that ended up important, in addition to influencing the process a little bit, is that was something we could involve the fellows in, and it really got people thinking about what are the practical implications of the work they're doing, and what are the important unanswered questions that could influence the development of the regulatory field. So doing the public comments, which was something some of the other centers did a little bit but we did it with a vengeance, and

again it was this crossover between science and kind of academic abstractness and making real-world decisions.

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And I used to tell people that it showed that the FDA were good sports, because they gave us all this money, and we mostly put in comments talking about how screwed up they were, and how they weren't doing the right thing. And we never did a formal study of this, but if you looked at the draft rules that were proposed, and what finally came out, I think we did have some—not as much as we would have liked, but we had some—influence. And it also created training opportunities, and another thing—

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Burnett: Sorry, the draft rules of the protocols?

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Glantz: Yeah, what happens when a regulatory agency is going to issue a rule, if you're not doing an emergency rule but like a normal go through the Administrative Procedures Act grind, they will publish a draft rule which you then comment on, and then they have to look at all the comments, and when they issue the final rule, they can do whatever they do but they have to respond to the comments and explain why they didn't listen to you. It's not done in extreme detail, but it's part of the regulatory process. And so if you go and look at some of the changes that would get made, we actually had some impact, and it was mostly FDA rules but we also did some things about smoking in multi-unit housing, and some CDC. They weren't regulations—they were guidelines—but commented on those, and also a little bit looking at marijuana in California.

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But it really does a good job, I think, if the person running it kind of appreciates the kind of bureaucratic imperatives that the agency's under, and making the science more relevant to actually impacting policy, and it's a great experience for the trainees.

06-01:45:44

Burnett: So with the Master Settlement in the late nineties, you might think that the tobacco industry lost. The cat's out of the bag. They made a mistake with the full disclosure [SG: part of the "papering" strategy], and all those millions of documents come out. And something that you've said earlier struck me, in that it's one thing to have data but it's people who make problems for the industry. The year that you were involved with the creation of the Tobacco Center of Regulatory Science, around 2013, there was an article in *Cancer Letters* on this pressure brought to bear by a Congressman directly on Francis Collins with respect to an article that you and your colleagues had done on the funding of the Tea Party [Fallin A, Grana R, Glantz SA. 'To quarterback behind the scenes, third-party efforts': the tobacco industry and the Tea Party. Tob Control. 2014 Jul;23(4):322-31. doi: 10.1136/tobaccocontrol-2012-

050815. Epub 2013 Feb 8. PMID: 23396417; PMCID: PMC3740007]. So I'm wondering if you could talk a little bit about that, with respect to this question of danger. So it was striking to me that you were saying that UCSF, there were administrative and financial concerns about hosting the documents, and setting it up properly, but there wasn't much trepidation about it. But here, it's years later, and you're facing some of this direct scrutiny and criticism from Congressional leaders, and being brought to bear on the FDA, being brought to bear on the institutions that fund your work.

06-01:47:42

Glantz: Yeah, well, if you go way back a long time ago—and I don't remember the specific paper, but it was when—I'm blanking on the guy's name—I think Richard Klausner had just been made the head of the NCI. And I don't remember the paper, but we published a paper that the industry really didn't like, and they brought pressure directly to bear on him about that, which I didn't know about at the time. But years later I was talking to a woman named Helen Meissner, who now she's in the NIH Director's Office, and she's the person in charge of the whole NIH/FDA collaboration, and the TCORS. And, in fact, the way the TCORS are structured, there are a couple of NIH and a couple of FDA people who attend the twice-monthly meetings of our TCORS group, and those are like the federal collaborators that are designated because of the way the grant's structured. Or now, actually, technically it's not a grant; it's what's called a cooperative agreement.

06-01:49:03

And I've come under attack recently, again, or a couple of years ago, and Helen and the people at NIH were very solid through all this, and after it was all over I saw her at some meeting and said, "I just wanted to thank you for not buckling, and for standing behind me and all this." She said, "Well, Stan, you don't know this but my very first job at NIH, or NCI was dealing with the pressure we were getting about that grant you did back when Rick Klausner was first made the Director." [laughter] She said, "I've been following you. You didn't know me, but I knew you for years."

06-01:49:50

And what happened was we were looking in the documents, and I don't remember if we stumbled into it or were looking for it, but the creation myth of the Tea Party is that it was this spontaneous uprising against Obamacare, and Barack Obama, and that it just came out of nowhere. And what we found was that that just wasn't true, that you could trace the development of what became the Tea Party all the way back to the 1980s, when the tobacco companies were trying to create their own grassroots pro-smoking groups. And I can't remember: did we talk about the local ordinance strategy?

06-01:50:40

Burnett: Yes.

06-01:50:41

Glantz: Okay, so the industry, they figured out that they could control Congress, they could do a pretty good job of controlling state legislatures, but they were really getting clobbered at the local level, so they tried to create their own grassroots counter-pressure to the grassroots nonsmokers' rights movement. And you can just draw a direct line from that to what became the Tea Party.

06-01:51:07

Now, there were other players. The Koch brothers came in with—I forget what they first called it [Citizens for a Sound Economy]—and then it split and became FreedomWorks and Americans For Prosperity. There were other forces, but the same PR firms, very same strategies. If you go back and look at the efforts that the industry organized to oppose FDA regulation of tobacco, to oppose Bill Clinton's healthcare reform, which was to be partially funded by a tobacco tax, they had Tea Party imagery, they had people dressed up as patriots, the whole thing. And so we wrote a paper called "To Quarterback From Behind the Scenes," which was a direct quote out of one of these industry planning documents, where we need to stay in the shadows, but we want to quarterback from behind the scenes to mobilize the public to make it look like a grassroots uprising.

06-01:52:12

So we published this paper—and this was an oversight on my part—normally if we had something coming out that I thought was going to be hot I would make sure to send an advance copy to [NCI]—they didn't get to edit it or anything. I just said, "Here's a paper we have coming out in a couple of weeks, just FYI." And I forgot to do that. And it got a moderate amount of press, and so Francis Collins showed up at the Appropriations Subcommittee hearing for the NIH and a Republican Congressman was waving this paper around, like, "Why the hell are you doing this? This is inappropriate," and blah, blah, blah, and Collins didn't know what to say. He was just completely blindsided—I mean, if I had sent this to the people at NIH, I'm sure it would have filtered up to him and he would have kind of forewarned or forearmed.

06-01:53:18

And in the end, Congress demanded an Investigator General investigation of the funding of that project. They never came directly after me, but it was just in this long history of efforts to shut my work down. And in the end there was a big investigation and they concluded that we didn't do anything wrong, and the NIH didn't do anything wrong, and it kind of went away. But one of the things I tell trainees is you've got to realize you're playing up against a group of people who are not nice people, and you don't want to be afraid to do things, you don't want to pull your punches, but you need to make sure that you're right and you need to make sure that your bases are covered, and that you don't leave anybody kind of exposed without at least warning them. But yeah, that was an exciting time. [laughter]

06-01:54:21

But as with the whole fight over the restaurant paper [Glantz, S. A. and L. R. Smith. "The effect of ordinances requiring smoke-free restaurants on restaurant sales." *Am J Public Health* 84, no. 7 (July 1994): 1081–5. Doi: 10.2105/ajph.84.7.1081. Erratum in: *Am J Public Health* 86, no. 6 (June 1996): 790. Erratum in: *Am J Public Health* 87, no. 10 (October 1997): 1729–30. PMID: 8017529; PMCID: PMC1614757], which was another big hoo-hah, what happened was other people carried the battle forward on my behalf. And, in fact, through an intermediary I was asked to keep my mouth shut, [laughter] and just let others deal with this. And this is hard for somebody like me, because I'm a very proactive person, but there are times where the right thing to do is nothing. And in the end it all blew over, but yeah, I felt bad about that because it did put Francis Collins in kind of a tough spot. But in the end, they said, "You didn't do anything wrong. The NIH didn't do anything wrong. The paper was peer reviewed. It was properly vetted."

06-01:55:24

Burnett: Right. So—

06-01:55:27

Glantz: But, yeah, you've just got to realize that those guys are out there.

06-01:55:34

Burnett: Yeah, and now your institution, the Tobacco Center, is committed to studying the industry as a disease vector. You are people making problems for the industry—

06-01:55:45

Glantz: Yeah, no question.

06-01:55:45

Burnett: —and you're going to be a target going—

06-01:55:47

Glantz: I mean, Pam Ling, who's succeeded me as Director, totally wonderful person, she and I did a paper some years ago, a documents paper, asking why does a tobacco company care so much about smoking in bars. Back in the mid-nineties, when California was debating its state law about smoking in public places and workplaces, I got a call from—and this whole issue of smoking in bars was just there were two or three local ordinances, and there were gigantic fights about bars. And my view at the time was kind of, who cares? I mean, if you look at the total amount of exposure people get to secondhand smoke, the fraction of total exposure that occurs in bars is quite low. I mean, if you work in them it's a problem, but if you just look at a population level, why are we having these gigantic battles over bars?

06-01:57:00

And I got a call from a guy named John Miller, who was the chief of staff of the State Senate Health Committee in California, saying that the tobacco lobbyists had come by, and they had offered a deal on this pending state law,

AB13, where if bars were left out they would sit on their hands and let the state double the tobacco tax. Now, the tobacco companies hate taxes because it cuts into their profits, it reduces consumption, and I thought, well, that's really odd, because they really don't like taxes, but this is saying they don't like smoke-free bars more than they don't like taxes. And I said to John, "That makes no sense to me, but anything they don't want that bad we shouldn't give them." [laughter] And I suddenly became an enthusiast for smoke-free bars.

06-01:58:00

Well, years later Pam and I went into the documents and asked why, and it turns out bars are strategically very important in the whole social norm thing, for two reasons [Ling, P. M. and S. A. Glantz. "Why and how the tobacco industry sells cigarettes to young adults: evidence from industry documents." *Am J Public Health* 92, no. 6 (June 2002): 908–16. Doi: 10.2105/ajph.92.6.908. PMID: 12036776; PMCID: PMC1447481]. One is smoking is so associated with bars that if bars become smoke-free, that's sending a very strong social message that smoking is out. And the second thing is that—and this is different for e-cigarettes, by the way—you hear everybody saying, "Well, people start smoking when they're kids, and if we can just keep kids from experimenting we would solve the tobacco problem," blah, blah, blah. And it is true that most people have their first cigarette when they're a teenager, but for cigarettes it takes a long time to go from that first cigarette to becoming a confirmed addicted smoker. Now, for e-cigarettes, especially Juul, that's not true. [snaps] They get addicted really fast, but that's a whole different problem.

06-01:59:14

And it turns out that around eighteen to twenty-one, maybe a little older, that's a period where a lot of kids who experiment with cigarettes quit, and where some of them go on and become a confirmed addicted smoker, and that transition period, the industry put a huge amount of effort into pushing them forward in that transition. And bars are socially very important to that age group, and so if you can keep smoking in bars to normalize the behavior and create social pressure to smoke, that helps with this transition, okay? And we published a couple documents papers about that.

06-02:00:07

So Pam then had a great idea. She said, "We can learn from the tobacco industry, and if bars are that critical we should do public health interventions in bars, and develop interventions to get people to quit." And so she worked with a marketing firm, and developed this very innovative program to go into bars, which were frequented by that age group, and get people really mad at the tobacco industry, because that motivates quitting, and to reinforce the nonsmoking norm. And it's worked great. It's been a tremendously effective intervention. There are now several states that have integrated it into their state tobacco control programs. But you could imagine if you have a rightwing pro-tobacco Congressman, what they could do with that study. And Pam got all beaten up over that by some conservative House Member, saying,

"This is an example of silly science, the NIH wasting taxpayers' money," blah, blah, blah.

06-02:01:30

Burnett: Yeah. And so one of the things that's happening, one of the legacies of the tobacco documents, is that you are shining a light on that dark area where the tobacco industry had practiced so successfully. It requires darkness to be effective, because a huge part of the norm of smoking is that it is a bit of an outsider, rebel activity, now anyway.

06-02:02:09

Glantz: Well, now, but that's actually not true. I mean, the tobacco companies—and this is something else we've written about—engage in what's called market segmentation, so the people who want to be outsiders, they position it that way, but it's also if you want to conform and fit in. So the industry, by going through different marketing channels, they identify—and this is something Pam did a lot of work on; I did some of it with her—is to look at the different market segments, and then they follow different media, and so you run different marketing messages in different channels. And with the advent of things like the internet, and social media, they can even target things more finely.

06-02:02:59

But you're right, but, see, I would put it a little differently, because one of the things we use the documents for, and people use it for, is to expose bad behavior on the part of the industry, and make it harder for them to engage in the bad behavior, but you can learn a lot from the tobacco companies. They have more money than we do. Their science generally is fifteen, twenty years ahead of the mainstream scientific community. And they have much more detailed, fine-grained marketing information than the public health side could ever afford to do. And so we've done a bunch of papers, and others, of, okay, let's just take what they did at face value. What can you learn from it, and how can you use the tobacco industry's very detailed market research to design more effective antismoking programs? Which is what Pam has done, and others. So it's also a tremendous resource, in terms of understanding. You can learn a lot from them about how to fight them, how to counter them.

06-02:04:20

And, in fact, I'm just reading a book right now about the origins of Juul by Lauren Etter [*The Devil's Playbook: Big Tobacco, Juul, and the Addiction of a New Generation*. Crown, 2021], who's a reporter with *Bloomberg*, and it turns out that the two guys who created Juul spent a lot of time with the documents learning how to design a more addictive product, and how to market it more effectively. So when I found that it was like, well, that's sort of a drag that they've used the documents for evil. [laughter] But that's one price you pay or risk you take when you just throw it out there and make it available to everybody.

06-02:05:01
Burnett: Right, right. But the larger point is that the risk of doing this kind of work remains—

06-02:05:07
Glantz: Oh, yeah.

06-02:05:07
Burnett: —if researchers are doing this work they can expect to be targets, in one way or another, of this kind of other strategy of the tobacco industry, to discourage that kind of research.

06-02:05:21
Glantz: Oh, yeah, definitely. I mean, they're still doing it to me.

06-02:05:27
Burnett: Right, right. Well, let's pause for now, and we'll take up next time and talk more about the academic service side of your career.

06-02:05:36
Glantz: Okay.

Interview 7: September 10, 2021

07-00:00:14

Burnett: This is Paul Burnett, interviewing Dr. Stan Glantz for the UCSF University History Series, and it's the tenth of September, and this is our seventh session, and we're here in San Francisco. And last time, again we were talking about the tobacco industry, and the value of that incredible trove of documents, and the uses to which they were put by public health researchers and medical researchers to understand, A, the science that they had produced to demonstrate the harms and the addictive nature of the product that they were selling; and you also revealed that entrepreneurs were making use of those documents to understand how to make new products that deliver nicotine. And so we began to talk about that last time. So I'm wondering if we could start by your telling us a little bit about your encounter with the development of e-cigarettes, and the research that you began to do around e-cigarette products.

07-00:01:47

Glantz: Well, when e-cigarettes first came on the market, around 2006 in the United States, a lot of people thought these things are going to be really revolutionary, that they're going to provide a substantially safer alternative to cigarettes, that they're going to help smokers stop smoking, and they're going to be a great public health boon. And that's not a crazy idea, for a couple of reasons. One is that the way a cigarette works is you take tobacco—and additives and stuff, but essentially tobacco—and you set it on fire. And when you set it on fire, you generate a nicotine aerosol, which is the smoke people think of, but technically it's an aerosol of nicotine, and that aerosol carries the nicotine down very deep into your lungs, where it's absorbed. It goes from your lungs to your left heart to your brain within a few seconds, and so you get a big hit of nicotine. And the nicotine molecule is shaped a lot like a molecule called acetylcholine, which is the molecule nerves communicate with. And so the nicotine stimulates your nervous system by basically mimicking acetylcholine, so you get a buzz. But then the nicotine stays attached to the receptor sites, the places that these molecules attach, longer than acetylcholine does. Acetylcholine, the way it works is you have, at the end of a nerve—nerves are electrical, but you get an electrical signal, goes down a nerve, and then it causes acetylcholine to be released, and it diffuses across a little gap called a synapse, and binds to specific sites on the downstream nerve called receptor sites [and triggers the downstream nerve to fire]. It's like putting a key into a lock. And then it [the acetylcholine] gets released [i.e., the key is removed from the keyhole], and reabsorbed [back into the upstream nerve, where it can be recycled and used again], and that's how your nerves communicate.

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Well, the nicotine goes in there and plugs into the keyhole and stimulates your nervous system, but then because the back end of the molecule is shaped differently [from acetylcholine] it kind of sticks longer than normal, and then it blocks normal communication [because another acetylcholine molecule

cannot bind to that receptor site]. And so then it [nicotine] acts as a depressant. It's actually a very complicated drug because it's both a stimulant and a depressant. And what happens, and the way nicotine addiction works, is that because you're interfering with the [normal] communication in your nervous system, your body reacts by creating more receptor sites, so the normal acetylcholine has a place to bind. Well, then when you take the nicotine away there's too many receptor sites, and it's like turning your nervous system up too loud. That's why people get anxious when they stop smoking or stop using nicotine.

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And so the idea of an e-cigarette was that you'll deliver a nicotine aerosol, so you get this rapid absorption and this big blast of nicotine in your brain like a cigarette, but you do it without setting anything on fire. And the fire generates a lot of bad toxic chemicals and combustion products, a lot of carcinogens, a lot of solvents, irritants. It's bad. And so the idea was, well, we'll generate the nicotine aerosol by heating up a liquid, and we don't have combustion, so you don't get all the adverse combustion products, and so that's going to be safer. And because it's inhaled, because you're delivering it through the lungs, because you have the hand-to-mouth action, which is part of the behavioral aspect of smoking, this would be a good alternative to cigarettes and be a good thing.

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So that's the logic of e-cigarettes, and it's not insane. I mean, it's a reasonable hypothesis. And when e-cigarettes first appeared on the market, I got asked many, many, many times to write, essentially, a scientific commentary, kind of the scientific equivalent of an op-ed, for a bunch of journals to say, "Well, Stan Glantz, you're a famous guy who thinks about these issues. What do you think?" And I said "no" to all of those. I bet I probably got fifty or a hundred requests over a couple of years, and I said "no"" to all of them, because I felt that you needed some evidence. It was an interesting theory, it wasn't obviously ridiculous, but we needed to wait and see was it true, because there's lots of things in medicine and in science that seem like a good idea and aren't.

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And, in fact, I had a meeting, I was back in DC for something or another, and this was shortly after Obama had come in, and the Deputy Commissioner at the FDA at the time was a guy named Josh Sharfstein, who used to work for Henry Waxman, who was a Congressman from California, one of the leading anti-tobacco people in Congress. And I got to know Josh when he was Waxman's health staffer, so I just dropped by to see him. And I said, "Gee, Josh, you worked in this Congressman's office, which is a very small staff, and now you're the number two guy at this huge, gigantic bureaucracy. How do you like it?" And we went out to lunch and just sort of shot the shit. And he said, "Well, what do you think of these new e-cigarettes?" Because at that point the FDA was actually trying to prevent them from being imported in the

United States, because then most of them were made in China, and the FDA took the position that these are illegal drug-delivery devices, that they're delivering nicotine, which is an addictive drug, without the appropriate FDA approvals. And I thought that was the right thing to do, but I said, "Well, it's the same thing I just told you: it's an interesting idea, but we need some data."

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And what's happened as the data has accumulated, it's just turning out that all of these hopeful ideas for e-cigarettes have turned out to be wrong. The way people thought about e-cigarettes, including me, was that it's kind of like a cigarette without as much bad stuff, because you don't have the combustion. Well, it's now turning out that they're just different. It's true—you don't have the combustion products; the classic cigarette carcinogen load is lower—but there are other toxic chemicals that are in e-cigarettes that aren't in cigarettes, because propylene glycol and vegetable glycerin are the carriers that are typically used. There's usually a lot of flavoring agents, which are fine to eat but when you aerosolize them and inhale them they do all kinds of bad things. And, plus, the aerosol itself, this ultra-fine particle suspension that you're breathing in, that is itself dangerous.

07-00:09:55

And what the research has shown—and this is not just looking at smoking and e-cigarettes, but looking at things like diesel exhaust and wildfire smoke and a whole lot of other things—is that just those tiny, little particles, which are maybe a fiftieth or hundredth the width of a hair—they're very, very tiny—themselves are quite dangerous. They stimulate inflammatory processes. They're so small they can go through walls, and they get right into your blood, right into your cells and do all kinds of bad things, and there's no way to get rid of that in an e-cigarette because that's how they work. You're just generating the aerosol differently.

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And when you jump ahead and ask about today's controversies about e-cigarettes—and there are still people working in public health who are honest people, not in the pay of the tobacco industry, who still think e-cigarettes are a good thing, but I think their thinking is stuck fifteen years ago, when these things first came on the market. And things that were reasonable hypotheses back then, I think if you just look at the evidence as it's accumulated, the more we learn the worse they look. And I have to say, as somebody who's been involved in a lot of scientific debates over the years, I've been really shocked at how unwilling some friends of mine have been to be open to the evidence as it's accumulated. Now, they say I'm just hysterical and want all the smokers to die; I get accused of that: "You want to prevent them from getting this lifesaving technology." But I just think when you look at the evidence in terms of heart disease, they're about as bad as a cigarette; probably lung disease, too. And while the cancer evidence is a lot more limited, because cancer develops much more slowly, that's even starting to look bad.

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And the other thing—and we did a huge what's called meta-analysis, which is where you go look at the whole literature and kind of average it out, statistically—the claim that they help people quit smoking, when you look at them as consumer products, where you just go to a vape shop or a Walgreens and buy them, they don't help people quit smoking, either [Wang RJ, Bhadriraju S, Glantz SA. E-Cigarette Use and Adult Cigarette Smoking Cessation: A Meta-Analysis. Am J Public Health. 2021 Feb;111(2):230-246. doi: 10.2105/AJPH.2020.305999. Epub 2020 Dec 22. PMID: 33351653; PMCID: PMC7811087]. So that idea turned out to be wrong. And this is actually a good example of a place of how do you judge the evidence, another thing we've talked about. Becomes very important, because if you're judging medicines, like a COVID vaccine, for example, where you're giving some medicine to people, under medical supervision, the gold standard way to test that is what's called a randomized controlled trial, and that's where, again, if you look at the COVID vaccine, they took a bunch of people, bunch of adults, and they said, okay, we're going to randomly either give people the vaccine or a placebo, just a saline injection, so they think they're getting vaccinated [to avoid the placebo effect] but they're not, and then you look and see how do they compare. Does the vaccine work? And that is the gold standard way to test a medicine, but it's not a good way to test a consumer product [that anyone can buy and use however they want].

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Oh, and by the way, when we looked at this about a year ago now, there were nine randomized clinical trials of e-cigarettes for cessation, and they actually help people quit smoking. But you've got to think: these were given out in a medical circumstance. They were supervised. They were usually paired with counseling. So they were being used as a medicine, and used as a medicine as a form of what's called nicotine replacement therapy, they had what's called efficacy. They worked, okay. So if e-cigarettes were going to be submitted to the drug side of the FDA, what's called the Center for Drug Evaluation and Research, or CDER, they have to demonstrate efficacy and safety. And, again, if you look at the COVID vaccine, they tested on a huge number of people, because they wanted to make sure it worked, and they also wanted to test it on enough people to detect any bad things, rare side effects that happened.

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Now, the thing is, when you look at most medicines, like blood pressure medicine, which had to go through the same kind of randomized control trials to get FDA approval, when you look in the real world it almost never works as well as it does in the randomized trial. Almost never. And there are several reasons for that. One is it gets given to people who weren't in the trial. The trial usually has very highly specific conditions of who even gets into the trial, and that's actually something drug companies sometimes manipulate to avoid finding stuff they don't want to find, but that's a whole other discussion. So the drugs get given to people who weren't tested [in the trial, i.e., not included in the trial]. They often get used off-label, or [in] ways other than the way the

trial said to use them. And then people often don't take their medicines when they're supposed to. And so all of those things add up to the medicines don't work as well in the real world as they do in the trials.

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Now, if you look at COVID, that's not the case. In the real world, the COVID vaccines have performed as well as they did in the trials, and the reason for that is because the government has really worked very hard to make sure that they're only given to the people who should be getting them, and that they're being given according to the same protocol that was tested in the trials. That's actually very unusual.

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So if you look at e-cigarettes, they've done these randomized trials, and they showed efficacy, but if you want to use an e-cigarette, it's not a medicine; it's a consumer product. And anybody who wants one, assuming they're of legal age, can go into a vape shop or a store, a gas station, and buy it, and they can use it whenever they want, however they want. There's huge variety in the kinds of products that are out there. And so I've been arguing—and this is actually a very important point, as the FDA is trying to decide what to do with these things—that the randomized trials are completely irrelevant to the real world. And the thing that matters is if you look at population-level observational studies. And what we found is if you look at that, they don't help you quit. Okay. And so I've actually on my blog been harping on this, because the FDA is saying, well, when we consider whether to approve the e-cigarette, not as a medicine but as a consumer product, we're [the FDA Center for Tobacco Products] going to look at the randomized trials, and what I've been saying is, "no, that's the wrong standard." That introduces a pro-e-cigarette bias into the discussion, and you should really be looking at the population-level observational studies, because that's what's going to affect what effect these things are having out in the world.

07-00:18:11

And I know this has been a very long answer, but so I think, today, if you go back and look at the original idea of an e-cigarette, something that's going to reduce harm, it's going to [have to] help people quit smoking, that the two core assumptions behind the idea of e-cigarettes just turned out to be wrong. Maybe they aren't as bad as a cigarette. Saying something is as bad as a cigarette is a pretty strong statement, because there are very few things out there—I mean, maybe taking a gun and shooting yourself in the head is as bad as a cigarette, but there just aren't any other consumer products out there that are anywhere near as dangerous as a cigarette. So saying it's not as bad as a cigarette is actually a pretty low bar, but I think that's maybe true a little bit, but not a lot. But the other thing is that the original motivating idea that this would become an alternative to a cigarette, at least as consumer products, just isn't true.

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And to me, when you look at the data that's out there—and there's now quite a lot—it just befuddles me that these people who I've known for years, who are smart people, who are good scientists, by and large, that they have just refused to absorb that evidence, and they're continuing to make arguments like were being made way back in the beginning, before we had evidence. So I'm sorry if I went on too long, but I've been thinking about this quite a lot lately. [laughs]

07-00:20:07

Burnett: This is all really important, and there's many different pieces of this that we should talk about. But, to be clear, the argument for e-cigarettes is this argument of harm reduction, which, if I think of how I encountered "harm reduction" as a term, was needle exchanges.

07-00:20:32

Glantz: Right.

07-00:20:32

Burnett: Right? That you're going to accept that someone is going to do harm to themselves with heroin itself—

07-00:20:39

Glantz: Right.

07-00:20:39

Burnett: —and you could avoid some of the more deleterious effects of the mechanism for the transmission of heroin—IV drug use, sharing of needles, which would result in HIV, hepatitis and all these other things—so you're worried about the hepatitis, you're worried about the HIV, but you're going to back off heroin for the time being and just focus on these things, and then encircle that needle exchange with other therapeutic and counseling services that could potentially ween them off the drug, right? It could be part of a suite of factors.

07-00:21:14

Glantz: Right, right. And there are legitimate kinds of harm reduction, but there are two problems with just saying—well, that's true, when you're talking about injection drug use and AIDS and hepatitis and all of that, but one thing is the needles aren't being provided by the drug cartels, [laughter] and the e-cigarettes are being provided by the same tobacco companies that are making the cigarettes, by and large. And if you go into the Tobacco Industry Documents, they view these as just one more product that they can use to keep people [particularly health-concerned smokers who were likely to quit smoking] as customers. And, in fact, another one of the kind of common beliefs in the early days of e-cigarettes—because the current generation of e-cigarettes, they're not—the e-cigarettes of 2006 came out of China, where they were developed. And it was like, well, this is going to be a disruptive technology that's going to compete with Big Tobacco.

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Well, it turns out, if you go into the [Tobacco] Documents, the big multinational tobacco companies had functioning e-cigarettes in the mid-nineties, well before the Chinese did, and they didn't take them to market for political reasons, but they had the technology [Dutra LM, Grana R, Glantz SA. Philip Morris research on precursors to the modern e-cigarette since 1990. Tob Control. 2017 Dec;26(e2):e97-e105. doi: 10.1136/tobaccocontrol-2016-053406. Epub 2016 Nov 15. PMID: 27852893; PMCID: PMC5432409]. And if you go back a few years before that and look at the discussions among management in these companies of why did they spend millions of dollars developing these new products—and there's e-cigarettes; there was heated tobacco products; and there was sort of an equivalent of oral nicotine—it was to hold on to customers [Apollonio D, Glantz SA. Tobacco Industry Research on Nicotine Replacement Therapy: "If Anyone Is Going to Take Away Our Business It Should Be Us". Am J Public Health. 2017 Oct;107(10):1636-1642. doi: 10.2105/AJPH.2017.303935. Epub 2017 Aug 17. PMID: 28817320; PMCID: PMC5599147]. Because what they recognized in the late eighties was that people were quitting smoking. All the harping by the health community and the medical community and public health that smoking is going to kill you, from dating back to the mid-sixties with the original Surgeon General's report, was sinking in, and a lot of smokers had gotten very health-concerned and they were quitting. And so the tobacco companies developed these products to appeal to those people to hold on to them as customers, not for harm reduction, in fact, not to help quit smoking, not all of the things that are being attributed to them by the scientists who liked them, and people at the FDA who, frankly, should know better. They were developed not to compete with cigarettes but to compete with quitting. [laughter]

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So if you think about it the way the tobacco companies [do], if you look at why did the tobacco companies develop these products, the proper thing to compare e-cigarettes to is quitting smoking. And if you look at it like that, they're harm-enhancing, not harm reduction. I mean, people say to me, "Oh, Stan, you're a puritan, you're against harm reduction," and that's not true. I'm all for reducing harm; it's just that I don't think e-cigarettes are doing that.

07-00:24:53

And the other thing, before I forget, if you go back to your needle injection thing, this isn't true but let's just say for the sake of argument that stainless steel caused hepatitis, okay? And then, if you're giving out people clean needles, and you're doing it all in good faith, and you're saying, "Oh, I don't have these dirty needles," but let's suppose there was something in those needles which was also causing hepatitis, then needle exchange would have turned out to be a terrible idea, because you're simply replacing one risk with another risk. And, again, when I talk to these people who continue to wave their pompoms for e-cigarettes, including important people at the FDA, it's like, haven't you read the research? They paid for a lot of it, in fact, that's

come out in the last five or ten years. Haven't you thought about why did the tobacco companies get into this business? And while it's true in the beginning [i.e., when they were first introduced into the US market] e-cigarettes were competing with Big Tobacco, because they were coming in from China, and there were all these little vape shops and things like that, but now all the major e-cigarette brands are owned or controlled by multinational tobacco companies. And these companies would not be in the business if they were actually reducing their profits.

07-00:26:41

If you look at Juul, which is like the archetype, which was developed here in San Francisco, and initially was competing with tobacco companies but Philip Morris, or Altria, which is the company that's the parent of Philip Morris, bought thirty-five percent of Altria, and they installed two high-level executives from Philip Morris Tobacco to run Juul, so it's de facto controlled by Philip Morris. Now—

07-00:27:14

Burnett: When was that, roughly?

07-00:27:15

Glantz: That happened about two years ago [in 2018]. And so let's just accept, for the sake of argument, that e-cigarettes were helping people quit smoking, okay, massively reducing cigarette sales. Well, one of the main profit centers for Altria is Philip Morris cigarettes, Marlboro and the other Philip Morris brands. So if e-cigarettes were really helping people quit smoking, what would a giant corporation do when they bought the company [Juul]? They would shut it down, right? That's what Facebook is in all kinds of trouble with the FTC over, right? They're buying up competitors and then closing them down, or—

07-00:28:03

Burnett: Absorbing their talent, or—

07-00:28:04

Glantz: —or absorbing their talent, and absorbing their customers into the Facebook customer base. Well, Philip Morris and Altria, they're pretty smart people, and if Juul was actually hurting their overall corporate profits, which are heavily driven by cigarette sales, they would have just bought it and closed it. So these are all kind of reality things that when I talk to—and it's a shrinking group of people in the health community who are still thinking e-cigarettes are a good idea, but it's like, "Hey, you know all about the tobacco companies. Have you thought about this? Have you read these documents?" It's like, "Oh, don't bother me with that." It's very strange.

07-00:28:57

Burnett: Well, we talked about harm reduction as this kind of tradeoff between the main agent, which is some addictive substance, like heroin, and these other ancillary harmful things that come along for the ride, but tell me a little bit more about nicotine itself. I mean, you started by talking about the ways in

which it transforms the body chemistry, and the body up-regulates to try and create more receptors, and that generates the anxious body, right?

07-00:29:34
Glantz: Right. The way that I think about it is because, again, the nicotine binds to these receptors, and then it stays stuck there longer than the acetylcholine does, the way I describe it when I'm talking to regular people is it's like putting a pillow over the speaker on your stereo, and so you want to hear the stereo so you turn the music up, so it sounds normal. And then when you take the pillow away, it's too loud. And so what happens with a cigarette, again, because inhaling a drug is the most reinforcing way to give it, you get this big hit on your brain and then it drops off over twenty or thirty minutes, and then what happens, or what happened traditionally, would be you'd just put another cigarette in your mouth. So smoking is self-treatment of nicotine withdrawal, so when the nicotine levels in your blood get too low, and your nervous system is getting too excited, you just pop another cigarette in your mouth and push the nicotine level back up to re-equilibrate the system. That's why one of the standard measures of how badly addicted you are is how long after you get up in the morning before you take your first cigarette. That's a very good measure of how addicted you are, and people who have their first cigarette before they even get out of bed, they're really addicted.

07-00:31:20
Burnett: Oh, the stories of people being woken up by their—

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Glantz: Oh, yeah, those are—

07-00:31:26
Burnett: And so in the middle of the night they have to have a cigarette.

07-00:31:29
Glantz: Yeah, well, those are the super-duper-addicted people. But nicotine has a lot of other effects, because the nicotinic receptors are all over your body. And so nicotine interferes with all kinds of bodily functions, and also you have something called your sympathetic nervous system, which is like your subconscious nervous system that controls heart rate and your digestive tract and all kinds of other stuff. And nicotine ramps that up, too. And so you're at a kind of chronic, heightened sympathetic state, and walking around being cranked up all the time, that's bad for your cardiovascular system. That's one of the ways that nicotine causes heart disease. And also, you hear a lot from the FDA, again, who should know better, and a lot of the e-cigarette enthusiasts will say, well, nicotine isn't a carcinogen; it doesn't cause cancer. And that's true: nicotine doesn't cause cancer, but if you have cancer nicotine makes it grow faster, by stimulating the growth of blood vessels into tumors, by disrupting the interconnections between cells in ways that promote tumor metastases.

07-00:33:07

And the thinking on nicotine—and I can't remember if I told you this or I was talking to somebody else yesterday about this—the whole idea of nicotine replacement therapy was developed in the seventies, and one of the people was a guy named Michael Russell, who's a very famous guy in England. And he said the nicotine doesn't kill you, the smoke does, and so let's look for a way to give people clean nicotine. And that's what led to the whole idea of nicotine replacement therapy, which, if done properly, actually works reasonably well, where you give people nicotine as a medicine to get them through the withdrawal period where they can adjust the behavioral stimuli, and then you ease the nicotine level back in the nicotine replacement therapy. [The Tobacco Documents reveal that Russell had undisclosed links to British American Tobacco. See Elias J, Ling PM. "Invisible smoke: third-party endorsement and the resurrection of heat-not-burn tobacco products." *Tob Control*. 2018 Nov;27(Suppl 1):s96-s101. doi: 10.1136/tobaccocontrol-2018-054433. Epub 2018 Jun 6. PMID: 29875153; PMCID: PMC6238082].

07-00:34:09

And it just drives me nuts because Mitch Zeller, who's the head of the FDA Center for Tobacco Products, and an old friend of mine, he gets up in these meetings and he quotes this very famous statement from Michael Russell from the mid-seventies, that nicotine keeps you smoking, but it's the smoke that kills you. And that was probably a reasonably accurate statement fifty years ago, when he made it, but we know a lot more about the non-psychoactive effects of nicotine. And while it's not the worst thing in cigarette smoke, it's still pretty bad.

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And, again, the idea of harm reduction, everything you do in medicine and public health is harm reduction, in one way or another, but it's just turning out that the ways in which people thought e-cigarettes would reduce harm, they don't. And I just don't understand why some people just won't see that. I get asked this by reporters all the time. It's like, well, what's wrong with these people? And it's like, well, I don't know, but you would think they have access to all the same evidence that I do, and, frankly, if the idea of e-cigarettes had turned out to be right I would be out there with my pompoms cheering them on, too. I don't own any stock in any of these companies, and if that had worked it would have been great, but it doesn't.

07-00:36:01

Burnett: Well, there's a couple of things I want to talk about in terms of—put a pin in this for later, but one question I have is there are other harmful substances that we legally consume all the time that are really, really damaging, such as alcohol and sugar. Those are the two big ones that I can think of; there's maybe others—trans fats, and so on. And so there's a question of where do you draw the line on this. Why is smoking such a passion for you, and, in other words, do you feel the same way about alcohol and sugar but you just have to pick your battles?

07-00:36:46

Glantz: Yeah, there's only one of me. [laughter] In fact, I've done work on sugar with Cristin Kearns and Laura Schmidt, and we're collecting sugar documents at UCSF now, and I've written several papers out of the sugar documents [Kearns CE, Schmidt LA, Glantz SA. "Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents." *JAMA Intern Med.* 2016 Nov 1;176(11):1680-1685. doi: 10.1001/jamainternmed.2016.5394. Erratum in: JAMA Intern Med. 2016 Nov 1;176(11):1729. PMID: 27617709; PMCID: PMC5099084; Kearns CE, Glantz SA, Schmidt LA. "Sugar industry influence on the scientific agenda of the National Institute of Dental Research's 1971 National Caries Program: a historical analysis of internal documents." *PLoS Med*. 2015 Mar 10;12(3):e1001798. doi: 10.1371/journal.pmed.1001798. PMID: 25756179; PMCID: PMC4355299. Kearns CE, Apollonio D, Glantz SA. "Sugar industry sponsorship of germ-free rodent studies linking sucrose to hyperlipidemia and cancer: An historical analysis of internal documents." *PLoS Biol*. 2017 Nov 21;15(11):e2003460. doi: 10.1371/journal.pbio.2003460. PMID: 29161267; PMCID: PMC5697802; Kearns C, Schmidt L, Apollonio D, Glantz S. "The sugar industry's influence on policy." *Science*. 2018 May 4;360(6388):501. doi: 10.1126/science.aat3763. PMID: 29724946; PMCID: PMC7289079.; Kearns CE, Glantz SA, Apollonio DE. "In defense of sugar: a critical analysis of rhetorical strategies used in The Sugar Association's award-winning 1976 public relations campaign." *BMC Public Health*. 2019 Aug 22;19(1):1150. doi: 10.1186/s12889-019-7401-1. PMID: 31438900; PMCID: PMC6704551]. And the behavior of the sugar industry on a lot of these issues of science manipulation and efforts to control the political environment aren't that different from the tobacco companies. And what we should be doing in regulation and in government is trying to mitigate these risks. And, for example, with alcohol—and I haven't really done any work in alcohol, but I've hung out with people who do—there are things, policies that could be put in place, that are in place in some places, to mitigate the risk.

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Alcohol is a little different than tobacco, in that with tobacco there is no safe level of consumption, whereas a little bit of alcohol—and I mean a little bit—actually seems to be good. People who drink a little bit have better cardiovascular function, for example. Now, if you drink a lot, then it's very toxic. But there are things you could do, like instead of selling alcohol everywhere, which we pretty much allow here in California and a lot of other places, there are still places that have state stores, where they limit where you can buy it. And those state stores don't go out and do active marketing. And there's lots of data showing that they have less drunk driving, they have lower—if you look at a whole panoply of alcohol-induced problems, it's better in the places that have de-commercialized making it available. And I think that's a good policy.

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Now, the alcohol industry has systematically been going around the country, lobbying and getting rid of those policies, and moving alcohol more into as unregulated a profit-driven situation as they can get. And so I think there are a lot of commonalities.

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And if you look at sugar, the big problem, if you look at the amount of sugar in the typical person's diet today, it's massively higher than it used to be. And I just noticed finally on the food labeling that you get on foods, they have added sugars now is there, and that was a fight that took years and years and years and years to get. And I think that we should be getting people back to eating real food, and using regulation to solve those problems. In Mexico, they put a sugar tax on sodas, and their diabetes rate went down. Laura Schmidt, who's one of my colleagues at UCSF, was actually heavily involved in that. And so there are policy solutions to these other things. But sugar and alcohol don't kill as many people as tobacco does.

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But in all of these areas—and these industries cooperate with each other. That's why, if you look at the Tobacco Documents Library that I helped start at UCSF, there's now a Sugar Documents Library, which I also helped start working with Cristin Kearns and the Library. There's opioid documents being added. There's documents on the chemical industry, and fossil fuels. [All are available at https://industrydocuments.ucsf.edu.] And the thing that's very cool about it is all of these things are cross-searchable, so you can go in and just look at the Tobacco Documents, if you want, but you can also at the same time look in the Sugar Documents. And what you find is there's a moderate amount of crossover, in terms of the people, in terms of the scientists that are willing to work for them, in terms of the scientific PR [public relations] strategies, in terms of the political strategies, the law firms, the PR agencies.

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And people are starting to develop integrated understanding of the corporate determinants of health. Because the thing that's true for all of these products, whether you're talking about tobacco or high-sugar foods or alcohol, which is being consumed way above what you might call the safe levels, is there are all multinational corporations sitting behind those products, making a ton of money. And if you put in place laws and regulations to mitigate the health effects, they would make less money. They wouldn't make no money. I've never supported banning tobacco, for example. I think we can get rid of it by just counter-marketing it out of existence and removing all of its political and social support networks. And then there's always going to be a few crazy people doing crazy things, and if some of them want to smoke tobacco, as long as they do it in a way that doesn't hurt me or anybody else, everybody does stupid things, and let them do it. But the problem is that all of these

health policies, it would end up making those products less profitable, and those companies want their products. It's just very simple.

07-00:43:02
Burnett: Well, it also seems that in each of those cases, although it's clearly strongest with tobacco, there is this question of freedom to consume, right? And with an addictive substance—and I think there's evidence that sugar and alcohol have addictive components to them—

07-00:43:20
Glantz: Oh, yeah, oh, yeah.

07-00:43:21
Burnett: —they alter your brain chemistry to crave that hit. You get a spike from sugar, and you get euphoria from alcohol, and so on. And the question becomes, then, are you free to consume that product, or are you addicted, in which case you have lost some of your agency? And that, to me, seems to be the central political question around the consumption of dangerous products is that you have to be free to make a reasoned choice to hurt yourself. And we do. I mean, it's normal to be a human being and hurt oneself once in a while. [laughs]

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Glantz: Or at least take risks.

07-00:44:07
Burnett: Take risks of some kind, right? And all these substances have that in common, and I think that's some of what's being faced right now, is—

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Glantz: Oh, yeah. That's another kind of dimension of the problem. And that's actually something that ended up having a lot of practical import in the regulation of tobacco by the FDA, because there's something called the Administrative Procedures Act that governs how regulations get made. And one of the things—at least, this has been interpreted since Ronald Reagan was President—is you need to do a cost-benefit analysis of a regulation, and there's actually a lot of debate about whether that's even a good idea, but that is the way it's being done, and no Democrat has gotten in there and changed it. And so when the FDA first proposed some regulations on tobacco products—well, the Congress instructed the FDA in 2009 to put better warning labels on cigarette packs, something that today in 2021 still hasn't happened. But FDA proposed these warning labels, and they did a cost-benefit analysis, and what the FDA said is, well, it's true that if you put warning labels on cigarette packages and it deters people from smoking, then you'll save a lot of money because they didn't get sick, but there's this problem of agency and freedom of choice, and that the smokers, by being talked out of smoking by the warning labels, is being deprived of the pleasure of smoking. It's something economists call consumer surplus. And the consumer surplus almost balanced out the health benefits, and so they ended up saying, well, the net cost-benefit

analysis is a little bit positive but it's kind of so-so, and that fact actually ended up key in a court decision striking down the warning labels.

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Now, this just made me crazy, and we actually wrote a couple of papers [Song AV, Brown P, Glantz SA. "When health policy and empirical evidence collide: the case of cigarette package warning labels and economic consumer surplus." *Am J Public Health*. 2014 Feb;104(2):e42-51. doi: 10.2105/AJPH.2013.301737. Epub 2013 Dec 12. PMID: 24328661; PMCID: PMC3905322; Song AV, Glantz SA. "Assessing tobacco regulation: moving beyond economists." *Tob Control*. 2015 Mar;24(2):123-4. doi: 10.1136/tobaccocontrol-2014-052095. Epub 2015 Jan 6. PMID: 25564284; PMCID: PMC4336827] making just the point you did: that the consumer surplus calculation that these economists do—and these are very famous—a guy named Gary Becker, who got the Nobel Prize for coming up with all of this—he developed this theory called rational addiction, because classical economics presumes rational choice. And we said, look, this makes no sense, because tobacco alters your decision-making process. It actually, especially if you start when you're a kid, physically changes the prefrontal cortex, which is the part of your brain involved in decision-making. And so if the drug is actually distorting the biology of decision-making; all of this theory you have just goes flying out the window. And there were people at the FDA who thought, yeah, you're right. They thought this whole consumer surplus thing was completely ridiculous. But this was when Obama was President, and one of the big advocates for that was a guy named Cass Sunstein, who's an economist in Chicago. I think he was the head of the Office of Management and Budget, or maybe he was the head of the part of OMB that reviews regulations [Office of Information and Regulatory Affairs]. And so that's one big reason we don't have better warning labels on cigarettes. So this is an example, by the way, of a pretty arcane scientific debate, which has extremely major impacts on just people in the public just walking around.

07-00:48:42

Burnett: Well, you mentioned people should know better, or this group should know better. I think that that is a theme: how do we know better? And I'd like to look at a couple of cases of papers that you co-wrote with folks that were challenged, and were quite controversial—

07-00:49:04

Glantz: Sure.

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Burnett: —and that turn on the kind of epistemological questions of how to do statistical research responsibly, or correctly. And basically there's two papers that were challenged, and we can go into the larger context of the challenge.

07-00:49:28
Glantz: Well, before that, before we talk about those two, which I'm happy to talk about—I've written lots of papers that have been challenged.

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Burnett: [laughs] Fair enough, absolutely.

07-00:49:40
Glantz: Lots and lots and lots of papers. And the paper that kind of got me famous, back when I was doing laboratory research, was about the role of the pericardium [Glantz SA, Misbach GA, Moores WY, Mathey DG, Lekven J, Stowe DF, Parmley WW, Tyberg JV. "The pericardium substantially affects the left ventricular diastolic pressure-volume relationship in the dog." *Circ Res*. 1978 Mar;42(3):433-41. doi: 10.1161/01.res.42.3.433. PMID: 624151]. Your heart is in a bag that kind of holds it in place, and the basic understanding of the pericardium was that its function was just to hold the heart in place. It's just a bag; the heart moves inside of it. And I wrote a paper arguing that the pericardium substantially affects the way the heart fills, even though it's just the bag. And that was wildly controversial, but it stood the test of time, and now people just accept it. And I did some of the early work showing that the California Tobacco Program was followed by big drops in smoking [Glantz S. "Changes in cigarette consumption, prices, and tobacco industry revenues associated with California's Proposition 99." *Tobacco Control* 1993; 2:311-314]. That was very controversial. Probably one of the most controversial papers we did early on was showing that when you ban smoking, heart attacks dropped right away, from a study in Helena, Montana that was attacked viciously. [Sargent RP, Shepard RM, Glantz SA. "Reduced incidence of admissions for myocardial infarction associated with public smoking ban: before and after study." *BMJ*. 2004 Apr 24;328(7446):977-80. doi: 10.1136/bmj.38055.715683.55. Epub 2004 Apr 5. PMID: 15066887; PMCID: PMC404491]

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All of those have stood the test of time. And, in a way, the best work always generates controversy, because you're challenging the status quo. That's not true for me; that's true for everything. In fact, we talked a long time ago about the history of physics [*The Physicists: History of a Scientific Community*, 1979] by Daniel—

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Burnett: Kevles.

07-00:51:30
Glantz: —Kevles, okay. There's a quote in there from I think it was Max Planck, but some famous physicist, that the new ideas take effect when the people holding the old ideas die. ["A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it." Max Planck, *Scientific Autobiography and Other Papers*, 1950, 33.] And I think

that's a little cynical, but it's—so I've done lots of papers. We did the first study showing that smoking bans don't hurt restaurant and bar revenues; those were two different papers [Glantz SA, Smith LR. "The effect of ordinances requiring smoke-free restaurants on restaurant sales." *Am J Public Health*. 1994 Jul;84(7):1081-5. doi: 10.2105/ajph.84.7.1081. Erratum in: *Am J Public Health* 1996 Jun;86(6):790. Erratum in: *Am J Public Health* 1997 Oct;87(10):1729-30. PMID: 8017529; PMCID: PMC1614757 and Glantz SA, Smith LR. "The effect of ordinances requiring smoke-free restaurants and bars on revenues: a follow-up." *Am J Public Health*. 1997 Oct;87(10):1687-93. doi: 10.2105/ajph.87.10.1687. Erratum in: *Am J Public Health* 1998 Jul;88(7):1122. PMID: 9357356; PMCID: PMC1381137]. The tobacco companies set up a front group that set up a front group that sued the University over that. And the paper Bill Parmley and I wrote back I think it was in 1991, arguing that passive smoking caused heart disease, the tobacco companies hired thirty-some people to write letters to the editor criticizing that paper [Landman A, Glantz SA. "Tobacco industry efforts to undermine policy-relevant research." *Am J Public Health*. 2009 Jan;99(1):45-58. doi: 10.2105/AJPH.2007.130740. Epub 2008 Nov 13. PMID: 19008508; PMCID: PMC2600597].

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So everything I do, I figure you need to really be—I tell my fellows and students, I say, you shouldn't be cautious but you should be careful, because everything you do in this space—and even stuff on ventricular function that I did—somebody's going to get mad about it. And the difference is when you're talking about tobacco, there's an industry out there orchestrating and hiring people to get mad, who often don't disclose the connections.

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So the thing that's happened—finally, after forty-some years of doing this, the tobacco companies and their pals managed to get a paper retracted, which, I'm sure, is one of the ones you want to talk about. And I think that was the object of a highly-orchestrated, multifaceted campaign, and I think the journal, frankly, panicked. But I still think there's nothing wrong with that paper, and that the criticisms that were proffered were bullshit.

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Burnett: Well, yeah, it seems that—

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Glantz: But anyway, that is something, though, that if you're doing innovative work, you need to just anticipate that somebody's going to criticize it. And the difference, whether you're talking about tobacco—and I know people who work in global warming issues; I've talked to them about this—there are orchestrated efforts to attack these studies. And, in fact, I mentioned earlier this paper that came out a while ago, looking at the ways that tobacco and other major industries attack research they don't like, because if it's widely accepted it could cut into their profits. Recruiting people who are not

obviously tied to the industry to join in the criticisms is one of the common strategies that these guys identified. And the other thing is the tobacco companies, who really pioneered a lot of this—and this is all stuff in the Documents, and things we and others have written about—I think the tobacco companies and their lawyers understand how science works better than most scientists do. And there are certain kind of things you get taught [about how to be a good scientist], and values that are very good: you need to be open to criticism; you need to be very self-critical; you need to recognize that everything you say is probably wrong, that at some point somebody's going to find something, and there's this constant adjustment as more information becomes available. It's interesting because, again, in the COVID debate, as the science has evolved people are saying, "Why does CDC keep changing its mind?" Well, it's because they keep getting more information.

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But the tobacco companies, and the sugar industry, and the oil companies in their efforts to counter global warming research, they manage to take those good values of being open to criticism, and just turning them up a thousand percent, to the point that it just becomes ridiculous. And the basic [industry] goal has always been to raise the standard of proof for anything to the point where it simply can't be met. Because if they can get people to simply dismiss the evidence, then they don't have to deal with it. For example—and one of our early Documents papers was on this—the tobacco companies invented the term "junk science," and "sound science" [Ong EK, Glantz SA. "Constructing "sound science" and "good epidemiology": tobacco, lawyers, and public relations firms." *Am J Public Health*. 2001 Nov;91(11):1749-57. doi: 10.2105/ajph.91.11.1749. PMID: 11684593; PMCID: PMC1446868]. And it was in response to a report around 1990 from the EPA that identified secondhand smoke as a carcinogen, and an air pollutant. And there was actually nothing new in that EPA report—the Surgeon General had said the same thing five years earlier—but the difference was it was the EPA, and it was converting a health problem into an environmental problem, and people have very different attitudes about involuntarily-exposed environmental risks versus voluntarily-assumed personal health risks.

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And so the tobacco industry created something called the Good Epidemiology Project to try and mobilize scientific opinion against this report. And what they did—and I remember seeing this survey at the time and thinking, this is very fishy—is they hired a firm and went out and surveyed epidemiologists to say, "Well, how big does the relative risk have to be to be something to think about?" And they were really pushing the idea that it had to be two, that being exposed to some toxin doubled the risk of whatever outcome you're interested in. And they didn't ever quite sell that, but why two? Because the risk for secondhand smoke [and lung cancer in nonsmokers] was around 1.2 or 1.3, so if they could get everybody to agree you had to double the risk before it was big enough to worry about, that would just [snaps] make the problem go

away. And you still, to this day, fifteen, twenty years later, still hear some people saying, "Well, this is a small risk. It's under two. We shouldn't bother with it." So they put a lot of effort into that.

07-00:58:37

And this has been reflected in the criticisms of these two papers we published in the last couple of years, to try to discredit the idea of what are called cross-sectional studies. A cross-sectional epidemiology study is like a snapshot in time, and you go out and you ask a bunch of people, "Do you smoke? Do you drink? Do you do this? Do you do that? How big are you? What gender are you?" All this other stuff. And, "Did you have a heart attack?", or something. And then what you can show is that, well, there's an association between smoking and e-cigarette use and heart attacks. But because it's just at one point in time, you can never be positive which way the association—you can say, well, smoking and e-cigarette use are associated with having a heart attack, but maybe people who had heart attacks, it made them want to smoke an e-cigarette. That's called reverse causality.

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And the industry has been trying since the fifties to get people to just say, "We're not paying any attention to cross-sectional studies, and we want what are called longitudinal studies," which is where you take people who haven't had a heart attack, you look at what products they're using, you follow them [forward in time, say] for five years, and you see who had a heart attack. It's a much better kind of study, no question, but it also takes a long time, and it's way harder to do and way more expensive. And by shifting the focus to saying we can only listen to longitudinal studies, you're effectively delaying any decision-making, and making it much harder to do, just because that's way, way, way harder and more expensive to do [longitudinal studies]. And those are kind of questions which have been playing out a lot in the e-cigarette debate.

07-01:00:33

If you go back to the 1964 Surgeon General's report that identified smoking as a cause of lung cancer in men [*Smoking and Health: Report of the Advisory Committee to the Surgeon General*]—they said it wasn't clear in women yet—that was mostly based on cross-sectional studies. And I think by the standards that these industries have beaten the scientific community into being overly skeptical of cross-sectional studies, they might have been able to keep that report from reaching that conclusion. The goal here is to just make it impossible to conclude anything.

07-01:01:20

Glantz: There's one other thing that's very important in all of this, which gets lost in all of this obsessing about statistical minutiae and methodology—and when I say that, I don't mean to say you shouldn't pay attention to it, but the other thing you have to ask is if I say A causes B from a scientific point of view, how do I reach that conclusion? And I don't think you can usually do that

based on any one bit of evidence, because every kind of evidence you have is flawed [in] one way or another. And this played out a lot in the work I did on the [California] Scientific Review Panel [on Toxic Air Contaminants], when we often had much less evidence than we have around something like smoking. And that is usually there's a constellation of evidence available. You have the statistical, the epidemiology, the population level results, and in terms of reality, those are the most valuable, because it's like real people actually getting exposed to some potential toxin and getting sick or not getting sick. So in terms of talking about humans, that is the most relevant data. But the problem with every single epidemiology study ever done is it's messy, because different people are different, because you always have to worry about how accurate is your data collection, is there recall bias, are there biases in the way the sample was constructed. There's a million problems that reality just intercedes. But it is the most relevant.

07-01:03:16

If you go to the other extreme and look at molecular studies, okay, where you show, for example, with smoking, when you look at smokers, there's a gene called p53, which is called the tumor suppressor gene. It's a gene that if a cell starts dividing too much it tells the cell to die. And it's been shown that smoking turns off the p53 gene, which is a key step in developing cancer. [The tobacco companies also mounted an attack on that research, too. See Bitton A, Neuman MD, Barnoya J, Glantz SA. The p53 tumour suppressor gene and the tobacco industry: research, debate, and conflict of interest. Lancet. 2005 Feb 5-11;365(9458):531-40. doi: 10.1016/S0140-6736(05)17871-4. PMID: 15705463.] Well, you can say, okay, but how do you know it was the smoking? Maybe it was some other thing. And then people went further and actually isolated the specific chemicals in the smoke that were causing the genetic damage by going into a test-tube and putting some cells in and putting some of this chemical in and saying, oh, look, p53 got turned off.

07-01:04:19

Well, in that case, you can be very confident about what happened, because you have a test-tube, it's clean, you put some cells in of a certain kind that you know, you put in a chemical, which you know what it was, and you can see what happened. And if you take a control and you don't put the chemical in, and the p53 doesn't get turned off, then you can be quite confident that the chemical turned it off. So you have very strong causality. But the problem with that is it's totally disconnected from reality, because the cells are in a test-tube, not in a person; because there's this whole constellation of other things that [may] go on in people that [may not be] going on in the [isolated] cell.

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And so you have what I like to call a chain of evidence: at one end you've got these molecular, very highly-isolated in vitro studies, where you can be very confident that A caused B in that experiment—and it's an experiment; it's not an observation, because you actually intervened—but the direct relevance to

people walking around in the world is very distant. And then, above that, you have maybe animal studies. And, again, you can do an experiment where you control everything, and if you expose the animal to e-cigarette aerosol for a year, and give it lung cancer—which has been done—then you can say, oh, well, probably the e-cigarettes caused the lung cancer. But these are mice; mice aren't people. Maybe the level of exposure was very high. I don't know. But animals aren't people. And then you have clinical experiments, where you have people, and you bring them in, and you do some kind of experiment on them. And, again, because it's an experiment where you're controlling the environment, you can make stronger causality statements, but, again, now you're getting into people, and people are different, and there's also things you can't do to people. [And even a human experiment is still an artificial environment.] You cannot say, oh, I'm going to test whether something's carcinogenic by randomly giving it to a bunch of people. That's just not—

07-01:06:39

Burnett: Although that was done.

07-01:06:40

Glantz: It was done, but you're not supposed to do it anymore. So you have that, and then you get to the epidemiology [where you look at the association between an exposure in the real world (say, smoking) and development of disease (say, heart disease)]. So you have this string of evidence, each kind of which has strengths and weaknesses. And when I'm willing to say A causes B, it's if you step back and you have this whole range of evidence and you look at it and you say, okay, is there a common picture that emerges from looking at the whole puzzle. Even though you don't quite have all the pieces in the puzzle, even though some of the pieces you have are damaged, but if you see a consistent picture across a range of kinds of evidence, then I think you can be pretty confident in saying that A causes B in people.

07-01:07:33

And when I look at, say, in the current debate in the e-cigarette discussion, say, around heart disease, that exists. There are animal studies, there are a few molecular studies, and there's the epidemiology, and they all fit together. And what I've said—and I've had big arguments in other areas with people—the question I ask them is, okay, I think e-cigarettes are increasing heart disease risk, because when you look at all of this evidence together that's the picture that emerges. Can you give me an alternate explanation that jointly, and at the same time, explains all this evidence at once? And when I've gotten into arguments with people on not just e-cigarettes but—another big thing I've had a lot of arguments with people about is smoking and secondhand smoke and breast cancer [Glantz SA, Johnson KC. "The surgeon general report on smoking and health 50 years later: breast cancer and the cost of increasing caution." *Cancer Epidemiol Biomarkers Prev*. 2014 Jan;23(1):37-46. doi: 10.1158/1055-9965.EPI-13-1081. PMID: 24420985]—I've never been able to find anybody who could give me an explanation that looks at all the evidence at once.

07-01:08:50

And what they do instead—and, again, this paper about common industry strategies for attacking science identified this, too—is you pick at every study. You nitpick every study. And there is no perfect study of anything. I can take anything I've ever done, anything I've ever read, and find five things wrong with it. And so what people do—and this is true in every scientific debate where I've seen science being attacked, no matter whether it's tobacco or global warming or sugar or anything else—is the people who are trying to undermine the science refuse to look at the big picture, and they nitpick and make very highly technical criticisms of little things in isolation.

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Now, that's not to mean you don't need to worry about things, and you don't need to do them right, or as right as is possible, but it's just different. If you look at the criticisms of the work we've done on e-cigarettes and heart disease, I keep coming back and saying, okay, okay, okay, you're arguing about some statistical fine point. There are statistical fine points [that need to be attended to]; I'm not minimizing that. But how do you explain the vascular effects that have been shown in animals and in people, that when you expose them to e-cigarette aerosol you right away get big depressions in vascular function, which we know is closely tied to heart attack risk? What about that? [The e-cigarette supporters respond,] "Well, I'm not talking about that. I'm not a vascular epidemiologist, or a vascular biologist. I don't know about that."

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And when you get back to these friends of mine that I've had arguments with, I've said, "Well, how do you explain these vascular effects which I think are really important?" It's like, "I'm an economist. I don't know about that." Well, learn. And I think one of the things that has allowed me to make a lot of important contributions—and this gets back to stuff we talked about in the very beginning—is I have kind of an unusual background. I started out in engineering. I know a lot about math, and I taught myself statistics, and I also have done a lot of laboratory work, and I hung around for my career with a bunch of cardiologists. And so having an appreciation of both the biology and the physics and the mechanics, and knowing about statistics and epidemiology, there are very few people—and I'm not saying this to be a blowhard, but there aren't that many people—who have just had a lot of experience in that whole range of stuff, which allows you to put pieces together that people who are more narrowly focused just can't do, or don't know how to do, or are not comfortable doing. And I think it's that ability—and it gets back to this issue of breadth that we talked about earlier in terms of how you train people—I think that breadth has really contributed a lot to my ability to do important work over the years.

07-01:12:31

Burnett: Yeah. Key among those is the cardiovascular knowledge and the biostatistics, both.

07-01:12:37
Glantz: Right, yes.

07-01:12:39
Burnett: Once you have those, and knowing the politics and the context, which you learned almost by osmosis because it was happening to you—

07-01:12:47
Glantz: Yeah. So we can go talk about those specific papers, but I think this broader—and it's just one other thing. Back in the sixties, there was this guy named [Bradford] Hill who was an epidemiologist who came up with something called the Hill Criteria for causality. I don't know if you ever heard of that, but—

07-01:13:11
Burnett: Oh, I think you mentioned it before.

07-01:13:12
Glantz: Yeah, it's very famous. And what Hill did is he said, "Okay, you go out and you do a study, epidemiological study, and you find an association, and can you believe it?" And there's a whole bunch of statistical, methodological things, like if it's a longitudinal versus a cross-sectional study, if you have what's called temporality, and if you have a dose response—that is, the more exposure you get, the worse it is—and then he has something called biological plausibility, and that is, okay, do you have a way to explain what you found in terms of the underlying biology. And I actually think that that's obsolete today, because I think our understanding of biology today is way, way, way past where it was when Hill came up with the Hill Criteria.

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And there are two ways that I think it needs to be updated. One is in terms of the connection between the biology and the statistics. I think it should be the other way around now. I think we know a lot about biology and a lot about biological effects of different toxins and stimuli, and that would lead you to predict an epidemiological effect. And then the question is: if you go looking for it, is it there? I mean, that's what physicists do. When they're doing particle physics, they don't look at fifty million cloud chamber pictures and try to find a statistical association. They had some theory that guides them to say let's look for this and see if we can find it. And I think that's what we should be doing now, at least in addition to the traditional approach. And then the other thing—I'm just blanking out on what the other one is. That's the important one. It'll come back to me.

07-01:15:10
Burnett: Well, it's a good introduction, actually, to these two papers, because the criticism that you get, your counter-criticism to that criticism is that if their method were true, it would go in the other direction. And we'll talk about that and what that means in a second. So the first one is a collaboration with Dr. Dharma Bhatta [Bhatta DN, Glantz SA. "Electronic Cigarette Use and

Myocardial Infarction Among Adults in the US Population Assessment of Tobacco and Health." *J Am Heart Assoc*. 2019 Jun 18;8(12):e012317. doi: 10.1161/JAHA.119.012317. Epub 2019 Jun 5. Retraction in: *J Am Heart Assoc*. 2020 Feb 18;9(4):e014519. Erratum in: *J Am Heart Assoc*. 2019 Nov 5;8(21):e002313. PMID: 31165662; PMCID: PMC6645634].

07-01:15:44
Glantz: Right.

07-01:15:44
Burnett: Okay. And both of these papers are on the relationship between reported e-cigarette smoking and myocardial infarction, or heart attack.

07-01:15:57
Glantz: Right.

07-01:15:58
Burnett: So this is the one that gets pulled from the *Journal of the American Heart Association*, and it has to do with the fact that the dataset that you're using is longitudinal, and you're doing a cross-sectional analysis.

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Glantz: Well, no, that's not quite true.

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Burnett: Okay, well, I'll let you explain it, then.

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Glantz: So that paper, there are two studies that we did out of the same dataset. It's something called PATH, the Population Assessment of Tobacco and Health. It's a gigantic longitudinal study that the FDA funds. And what we did was we took the PATH data and we did two analyses on it: we did a cross-sectional analysis, and we said, look, we have found the same cross-sectional association between e-cigarette use and having had a heart attack, controlling for smoking, that we had found in the earlier study [Alzahrani T, Pena I, Temesgen N, Glantz SA. "Association Between Electronic Cigarette Use and Myocardial Infarction." *Am J Prev Med*. 2018 Oct;55(4):455-461. doi: 10.1016/j.amepre.2018.05.004. Epub 2018 Aug 22. Erratum in: *Am J Prev Med*. 2019 Oct;57(4):579-584. PMID: 30166079; PMCID: PMC6208321] using another dataset called the National Health Interview Survey, another cross-sectional dataset. And then we did an additional analysis, longitudinally, where we took people who hadn't had a heart attack and then followed them forward in time to see is e-cigarette use at the beginning associated with having a heart attack I think it was three years later, or by three years later. And when we did that, we found elevated risks but they didn't reach statistical significance. And we reported that. We completely and fully and honestly reported the data. And we said we think the reason we didn't reach statistical significance was because there weren't that many heart attacks, because people using e-cigarettes tend to be young, and it wasn't that long, and so it

maybe is what's called a statistical power problem; that is, that the study wasn't big enough to detect something above the background noise. So we completely reported that.

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One of the criticisms that came up during the peer review process was that, well, you don't know when people had their heart attacks versus when they started using e-cigarettes, because it's cross-sectional data, or that's what we had said in the manuscript, as it was originally submitted. And one of the peer reviewers came back and said, "Well, actually, you do know when they had the heart attack. That's in the restricted use data file." So the PATH dataset, there are two versions of it: there's the public use dataset that you could go on the internet and download [snaps] right now, and then there's a more detailed restricted use dataset that you have to get permission to use, and there's a whole bunch of rules about it, because it contains more details about the respondents, and they want to protect the respondents' privacy. So if you use the restricted use dataset, there's a lot of extra security around it. You can't download it; you have to log in remotely to a computer at the University of Michigan. And, importantly for this story, before you publish any results you have to submit them to Michigan to review to make sure that you are only reporting aggregate results, and that they're sufficiently aggregated that some crazy person couldn't take your results and reverse engineer them and figure out who the respondents were. So it's to protect the privacy of the respondents.

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So anyway, the reviewer said, "Well, actually, you do know when they had the heart attacks from the restricted use dataset." And they said, "E-cigarettes didn't come on the market until 2006," I think, "and you need to take that into account." And so what we did was we simply dropped every case where the heart attack occurred before 2006 and then reran the cross-sectional analysis. And what happened is what are called the point estimates—that is, the one number you get out didn't change much, but because the sample size got much smaller the confidence intervals expanded, and the results lost significance. I don't remember if all of them or some of them, but it doesn't matter. And we reported that. So if you go read the paper, all of this, including the nonsignificant results, is reported in the paper. I think it was a complete, honest assessment.

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Well, one of the things that happened along that way—well, let me come back to that. So then, a guy named Brad Rodu, who's a professor in Louisville, Kentucky, who has gotten millions of dollars from the tobacco industry over the years, and who a substantial fraction of his publications are papers criticizing other papers, coming up with what I think are very tortured statistical analyses to try to make effects go away, and he's written several letters to the editor criticizing other papers we've written, and the journals publish them, along with our responses, and the papers stood. So Rodu wrote the journal, and he said that what Bhatta and Glantz did is wrong because of

this when the heart attack occurred, and what they should have done was taken anybody who had a heart attack and was an e-cigarette user, where they had the heart attack before 2006, and they should have treated them as not e-cigarette users, because the heart attack occurred before e-cigarettes were on the market, and that's how it should be done, and when I did that the result went away.

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So the journal wrote me and said, "This guy has made this criticism, and we want you to go reproduce his analysis and tell us did you get the same thing when you did it the way he did it." And the problem I ran into was Bhatta—I mentioned that there are these very strict rules about getting access to the PATH dataset. It turns out that a couple of the tables in the paper Bhatta had not properly cleared with Michigan, and somebody pointed that out to Michigan, and they hit the ceiling. And they said, "Because you broke our rules, we're terminating your access to the data."

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Burnett: Including for the whole university, right? UCSF is—

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Glantz: Right. Well, yeah. Well, let me get to—I mean, this gets into wheels inside wheels, but these are important details. So what happened, they terminated Bhatta's access and my access—well, I left a step out that's important. So what happened is we get this, and I went to Dharma, who's a very nice guy, and I said, "Dharma, did you clear this [the tables in question]?" Because I just assumed he had. And he said, "Well, actually, no." So I said, "You need to submit those tables to Michigan right now, and we need to get them properly cleared so that we can get right with the world." Well, Dharma's fellowship had ended on June 30th of whatever year it was, and this all happened in the first week or so of July, so Dharma submitted the stuff to Michigan after his employment at UC had ended. He was still here; he was hanging around for a couple of weeks, wrapping stuff up. And under the terms of the agreement with Michigan, who manage this dataset, if somebody left the university they were supposed to be notified.

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Now, I had assumed that the university—because the university signs the agreement [to get access to the data]. I mean, I sign the agreement as a member of the faculty, but it had to be countersigned by the university's research bureaucracy. And I just assumed that it was the university's responsibility to notify Michigan [that Dharma was no longer a UC employee], just like when you leave employment at UC after—there's a couple weeks or a month where your email stays active, and then it disappears. And I just assumed when Dharma got into the Michigan website it was because there was a grace period. Well, it turns out there wasn't, and so Michigan not only got mad at me, they got mad at UCSF and shut everybody at UCSF down.

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So I went to the compliance bureaucracy at UCSF and told them what happened, and they said, "Well, this is bad. You broke the rules. This is unfortunate. This happens. What we'll do, we're going to have to do a bunch of things to remedy the problem. You're going to have to probably get some additional training, and the university will promise to be better, and then you'll get access back." And so we did all of that, and Michigan just said, "Screw you. We're not letting you back."

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So what happened was the journal was demanding that we do this additional analysis, which required access to the restricted use dataset, and we didn't have any access to the restricted use dataset. And I told that to the journal, and I said, "Look, the normal—" And this is why I think there was something very fishy going on, because the normal protocol—and I was an Associate Editor of the *Journal of American College of Cardiology* for ten years, and was an Academic Editor for *PLOS One* for probably five years, although at that job I didn't get too involved in these issues of fighting over papers, and I don't think *PLOS One* publishes letters. But the normal protocol that the journal should have followed was they should have sent me Rodu's letter and given me a chance to respond, and then the editors, seeing my response to Rodu, could have decided what to do, but they refused to give me Rodu's detailed criticism, which was very odd. I am, to this day, convinced somebody got to somebody.

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And so we went back and forth and back and forth, and then the journal said, "Well, you haven't been able to do this analysis," because we were locked out of the data. They were unwilling to give me Rodu's detailed criticism to respond to. In the meantime, a letter, signed by fifteen or twenty people, several of whom had ties into the e-cigarette industry, and all the rest of whom were e-cigarette enthusiasts, sends a letter to the journal demanding the paper be retracted. The journal wouldn't give me the letter, but it turned up on a website for a rightwing organization called the Reason Foundation, which has taken money from the tobacco companies over the years, and supported the tobacco companies on a variety of policy issues around secondhand smoke and e-cigarette and smoking in the movies. So the people at Reason went after me quite regularly. So it was also kind of strange. [These documents are all linked to Stan Glantz's blog post "Journal of American Heart Association caves to pressure from e-cig interests" (February 18, 2020) on the UCSF Tobacco Center website at https://tobacco.ucsf.edu/journal-american-heart-association-caves-pressure-e-cig-interests, also archived at https://web.archive.org/web/20210201162243/https://tobacco.ucsf.edu/journal-american-heart-association-caves-pressure-e-cig-interests]

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And another thing that was strange was the first I heard of Rodu's criticism—and, again, the normal protocol would have been Rodu writes a letter to the

journal, the journal sends the letter to me to respond, and then typically publishes both letters—the first I heard of Rodu's criticism wasn't from the journal; it was from a reporter at *USA Today*, which is very odd. So somebody, some PR person, gave Rodu's criticism to *USA Today*, who then called me up, when I had never seen the criticism, and said, "Well, what about this?" Very strange.

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Now, this was not without precedent. If you go back to 1981, when a guy named Takeshi Hirayama, who was a Japanese epidemiologist, published the first paper linking secondhand smoke to lung cancer, showed that nonsmoking women married to men who smoked in Japan had more lung cancer than nonsmoking women married to nonsmoking men [Hirayama T. "Non-smoking wives of heavy smokers have a higher risk of lung cancer: a study from Japan." *Br Med J (Clin Res Ed).* 1981 Jan 17;282(6259):183-5. doi: 10.1136/bmj.282.6259.183. PMID: 6779940; PMCID: PMC1503989]. It was a longitudinal study, tour de force epidemiology, so, A, it's a very famous paper, and that was the first time I was ever on the national news. CBS called me up, and I was on *CBS Evening News* talking about the Hirayama paper, and, "This is an important paper," blah, blah, blah.

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Well, some months later I get another call from CBS, saying, "Well, what do you think of the criticisms of the Hirayama paper from Nathan Mantel"—who's a very famous statistician—he was retired, I think, by then, but very famous guy—"that Hirayama screwed everything up?" So I said, "Well, let me go see." And back then the library was in the basement of the science building at UCSF. I went down there, and I looked in the *British Medical Journal*, which is where Hirayama's paper published, looking for the letter published by the journal. It wasn't there. So I asked the library, "Could you find this letter?" Nobody could find it.

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So it turns out that the Tobacco Institute, which was the tobacco industry's lobbying organization, had hired Mantel to critique Hirayama's letter, and they then ran ads attacking Hirayama's paper, and sent out press releases to the media attacking Hirayama's paper, without Mantel's criticism ever being published. And this became a whole big folderol, and nine months later *BMJ*, to its credit, demanded that Mandel publish the letter in *BMJ*, and gave Hirayama a chance to defend himself, in which case he completely demolished the criticism [*Br. Med J (Clin Res Ed)* 1981; 283:914. https://www.bmj.com/content/bmj/283/6296/914.2.full.pdf].

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So what happened to me was not that different than what happened to Takeshi Hirayama all those years ago. But in the end, because I couldn't get access to the data—which, again, was very strange; UC jumped through all the burning

hoops; I did all the things I was supposed to do—we said we screwed up; there was no question that Dharma screwed up and I didn't catch it—but they just said, "No, we're not—" And I even had the principal investigator for the whole PATH study and people at NIH saying to Michigan, "We think you should remedy this?" And Michigan just wouldn't do it. So somebody, I think, got to them, too. But then they [*JAHA*] said to me, "Well, we'll give you a chance to retract the paper, or we're going to retract it." I said, "I'm not retracting it. I don't think there's anything wrong with the paper." And if you go read the retraction ["Retraction to: Electronic Cigarette Use and Myocardial Infarction Among Adults in the US Population Assessment of Tobacco and Health." *J Am Heart Assoc*. 2020 Feb 18;9(4):e014519. doi: 10.1161/JAHA.119.014519. Epub 2020 Feb 18. PMID: 32066313; PMCID: PMC7070182], it actually spells out this problem about getting the data.

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Well, just in the meantime, while all this was going on, there's a lobbying advocacy group, a consumer group called CASAA, Consumer—I can't remember what it stands for, but it's an e-cigarette advocacy group. And CASAA started a letter-writing campaign directed at the journal attacking this paper. So there was clearly a highly-orchestrated campaign. This was not just one professor saying, "Oh, I read Stan Glantz's paper and think there's something wrong with it." And so the paper got retracted. I think it's a scandal that this journal caved. I've had many of my papers attacked by Rodu and other people tied into tobacco, and we've defended them. So that's the story.

[Other than the fact that the effort was successful, this episode was not substantially different from efforts quietly organized by industry to attack my earlier work. See Landman A, Glantz SA. Tobacco industry efforts to undermine policy-relevant research. Am J Public Health. 2009 Jan;99(1):45-58. doi: 10.2105/AJPH.2007.130740. Epub 2008 Nov 13. PMID: 19008508; PMCID: PMC2600597.]

07-01:34:12

Now, there's an interesting footnote, because a few months later Rodu published his criticism of our paper in a different journal, a journal called *Addiction* [Rodu B, Plurphanswat N. "A re-analysis of e-cigarette use and heart attacks in PATH wave 1 data." *Addiction*. 2020 Nov;115(11):2176-2179. doi: 10.1111/add.15067. Epub 2020 Aug 13. PMID: 32794213]. It's a decent journal, but it's very pro e-cigarette, and it's out of England. And *Addiction* sent it to me and said, "We're going to give you a chance to respond to this." Well, when I finally saw Rodu's criticism, it was complete bullshit, because what Rodu did—and this is a statistical fine point, but it's a very important fine point—again, when you do a cross-sectional study, it's a snapshot in time. You know who used e-cigarettes, who had heart attacks, is there an association. What Rodu did was he said, "Okay, if you had the heart attack before e-cigarettes came on the market, I'm going to say you didn't use

e-cigarettes." So he kind of turned it into a half-longitudinal study, but he didn't do anything to the control group, okay?

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And what we did, when we went back, in response to the criticism from the peer reviewer, which was a legitimate criticism, we threw everybody out from before 2006. So we treated the control group and the exposed group the same, which is the right way to do this. And just to be sure, I went and talked to Chuck McCulloch, who's the Head of Biostatistics at UCSF. And he said, "Yeah, what this guy did is crazy. It's just not an established statistical technique."

07-01:36:01

So we then actually had a chance to respond to Rodu, and I think we tore him to shreds [Bhatta DN, Glantz SA. "The proper approach to assessing the impact of the fact that e-cigarettes were not available before 2007." I. 2020 Nov;115(11):2180-2182. doi: 10.1111/add.15103. Epub 2020 Aug 13. PMID: 32794248; PMCID: PMC7949485]. And so what I did, while that was going on, is I went back to the *Journal of the American Heart Association*. I said, "Well, you guys wouldn't show me Rodu's criticism. I've now seen it, and here's our response, and it turns out that what he did was so bizarre, and so out of the range of established statistical techniques, that we can respond to him without even having access to the data, because what we did is the right way to deal with this problem about e-cigarettes not being on the market." And two hours later they wrote back and said, "Drop dead," which I think was also scandalous. I even said there's a precedent for this with *BMJ* and Hirayama, and they just didn't want to hear about it.

07-01:37:04

So I'm still really irritated about that. I think that the journal behaved very badly. In talking to people, in talking to Chuck McCulloch, who'd had a similar attack once because he had done a paper that the antiabortion people didn't like, everybody said, "Why isn't the journal just publishing Rodu's criticism and your reply and let the community answer [the question of whether or not your paper stands]?" But they [the *JAHA* editors] wouldn't. And there were just too many things going on. [Who placed the story at *USA Today*?] How did this letter [by the e-cigarette supporters] end up at Reason? Frankly, when I was editing *JACC*, or [an] Associate Editor of *JACC*, if somebody had gone to *USA Today* with a criticism of a paper, and then sent that to the journal expecting us to publish it, we'd have told them to go to hell, because the normal protocol in peer review is you go through the peer review process before you go to the media, and you don't go to the media until the paper's published.

07-01:38:21

So that was another thing that was very [unusual]—and I pointed this out to *JAHA*. I said, "Hey, this guy's already taken his criticism to the media. He's completely gone outside the process. Why are you even giving him the time of

day?" And also, the other thing that was just very odd is *USA Today* is a national newspaper; how are they going to get interested in an arcane statistical debate off in a journal before it's been resolved? So there were some PR people involved. If we were still getting new tobacco documents, because that time has now just ended this month, in a few years I'm sure the planning correspondence about all this will turn up. It did tremendous damage to my reputation. So I think Rodu definitely earned his keep from the industry, but I just still to this day can't believe the journal behaved the way they did.

07-01:39:38
Burnett: Well, speaking of that, in the submission of the letter to the journal *Addiction*, Rodu and Plurphanswat—

07-01:39:49
Glantz: I have no idea how to pronounce it.

07-01:39:50
Burnett: —Plurphanswat is the other scientist—that letter provides the following disclosure: "Since 2005, B. R. Rodu has been supported by the Kentucky Research Challenge Trust Fund, and by unrestricted grants to the University of Louisville, from tobacco manufacturers Swedish Match AB, US Smokeless Tobacco Company, Reynolds American Incorporated Services, Altria Client Services, and British American Tobacco. N.P. has been supported by these grants since 2013."

07-01:40:30
Glantz: Yeah, well, see, the other little interesting tidbit about that was when they originally submitted the letter to the journal that [disclosure] wasn't there, and what happened was when I responded back I said, "Hey, these guys have very close ties to the tobacco industry and they didn't disclose that." And so the journal then made them, because I had basically said, "Hey, guys, you're not following your own disclosure policy." So that got added. And that grossly understates Rodu's ties into the tobacco industry. If you go into the Tobacco Documents [and put his name into the search engine, https://www.industrydocuments.ucsf.edu/results/#q=rodu&h=%7B%22hideDuplicates%22%3Atrue%2C%22hideFolders%22%3Atrue%7D&cache=true&count=4172], he's given R.J. Reynolds marketing advice. His ties with the industry go back a long time, and are very deep. But, yeah, that was left out in their letter as originally submitted.

07-01:41:23
Burnett: Something you wrote in the letter is something worth saying, because people don't understand how serious a retraction is, and the criteria for retraction are important to note here. So the Committee on Publication Ethics Guidelines state: "Journal editors should consider retracting a publication if they have clear evidence that findings are unreliable, either as a result of misconduct, e.g. data fabrication or falsification—for example, image manipulation—or

honest error, miscalculation, or experimental error." You're saying this is very, very serious, and this does not rise to that degree.

07-01:42:08
Glantz: No. In fact, if you read the retraction statement they say there was no scientific misconduct, because I was basically threatening to sue them at that point. And there was no data manipulation, and I don't think there was an error. I think the additional analysis we did in response to the peer review addressed the problem Rodu raised correctly, and the way Rodu did it was wrong. And, in fact, to show you how bizarre what he did was—I don't remember the precise details, but his analysis showed that using e-cigarettes significantly reduced your risk of a heart attack. And there's just no way that using an e-cigarette is a treatment to prevent heart attacks. It just goes against everything in the biology.

07-01:43:05
Burnett: Right, right. So—

07-01:43:08
Glantz: Yes, that was awful. But I think probably had we had access to the PATH data, we could have at least done the analysis that they were demanding, but the problem is we don't think that analysis is correct. And I went to Chuck McCulloch, and I gave it [all the correspondence with *JAHA*] to him and just said, "What do you think of this?" And he said, "This is wrong." And so I wonder if we had had access to the PATH data, and then reproduced Rodu's analysis, they would have come back and said, "Okay, we want the paper changed to put in this analysis that's wrong. Then we'll publish it with the wrong analysis if you publish an erratum adopting Rodu's analysis." Well, that's bullshit, too. And, again, what the journal should have done—and, in fact, a whole bunch of other people, as the word got around this was going on—I don't know how many because they never showed it to me, but a bunch of other people wrote the journal saying, "This is not appropriate. The right way to deal with this would be to publish Rodu's letter and Glantz's response and let the community decide." And they didn't even get a response. So on my infinite list of things to do is to figure out what actually—because somebody got to somebody.

07-01:44:50
Burnett: May I read the conclusion of your letter that you wrote to them?

07-01:44:53
Glantz: Yeah, sure. I don't—[laughs]

07-01:44:55
Burnett: Yeah. "Moreover, since there is no falsification, misconduct, or gross error"—and, in parentheses, "(data limitations are not errors)"—"retraction would merely be canceling research because some researchers disagree with the paper." And then later you write: "When I circulated a draft of this response to several senior colleagues, they cited examples of how polarization and

atypical practices such as these efforts to weaponize the COPE guidelines by e-cigarette advocates were scaring researchers, especially junior people, away from the field." And you were saying for that reason we should draw attention to the misuse of the guidelines and have additional safeguards to ensure protocols are invoked. I'm interested in the—

07-01:45:44

Glantz: Yeah, one of the things that's on my infinite list—I don't know if I'll ever get around to it—is to go to COPE, the Committee on Publication Ethics, and say, "Here, you guys need to investigate this journal." I don't know if that's something they do, but this was very serious, because, as I said in that letter, I'm not the only person they've gone after, and the word gets around and a lot of postdocs and graduate students say, "I don't want to deal with this." I'm still angry about this. But when this all happened to me I was in the process of getting ready to retire. I'm retired. I'm still doing my thing. And while it's aggravating, it didn't have a material effect on my life, actually. But Dharma Bhatta was a young guy, and he's got this retraction out there. And I haven't talked to him about this but it's got to be making his life difficult. And that's why that statement in there. They wanted to get me. They could have given a rat's ass about Dharma Bhatta, who they'd never heard of. And Dharma, at one level, he is responsible because he didn't follow the PATH rules, which when he told me that—I mean, he's just the sweetest guy, too. He said, "Gee, if I'd have thought it was [going to cause] all this trouble, I'd have followed the rules." It's like, hey, you follow the rules. Don't screw around. But this has [probably] done much more damage to his career, I think, than mine, and these people just don't give a shit.

07-01:47:45

Glantz: I have just one last thing to close this out, because we didn't talk about the other people, the one in the *American Journal of Preventative Medicine* [Alzahrani T, Pena I, Temesgen N, Glantz SA. "Association Between Electronic Cigarette Use and Myocardial Infarction." *Am J Prev Med*. 2018 Oct;55(4):455-461. doi: 10.1016/j.amepre.2018.05.004. Epub 2018 Aug 22. Erratum in: *Am J Prev Med*. 2019 Oct;57(4):579-584. PMID: 30166079; PMCID: PMC6208321].

07-01:47:54

Burnett: No, we didn't, that's true.

07-01:47:55

Glantz: Okay, well, that is very quick. That was also attacked, and a retraction was demanded by a group of people. I could not get the journal to give me the letter. I don't know who they were, but probably the letter's on the Reason website or something; I haven't looked. But in the end the paper wasn't retracted. There was no correspondence, but the journal said, "Here are the complaints that have been raised." They gave me a chance to respond. I responded. And then they said, "Well, we think there is some merit to these

criticisms," which I don't agree with, but no study is perfect, but they didn't retract the paper.

07-01:48:48

And then what they did—and this is kind of an ongoing story—is they then published a paper by Mike Siegel, who is one of my critics—a former student of mine, by the way, just a masters student from Berkeley but who had worked with me years ago—and some other guy where they wrote a paper tearing apart our paper [Critcher CR, Siegel M. "Re-examining the Association Between E-Cigarette Use and Myocardial Infarction: A Cautionary Tale." *Am J Prev Med*. 2021 Oct;61(4):474-482. doi: 10.1016/j.amepre.2021.05.003. Epub 2021 Jul 23. PMID: 34304940]. I then did what you should do: I wrote a letter to the editor saying their analysis is flawed, and here's what they did wrong. The editor sent it to Siegel and Critcher is the other guy's name; he's from Berkeley, actually. You're normally allowed five hundred words, and I wrote seven hundred words, because I wanted to carefully explain what was wrong with their criticism. The editor then came back and said, "Well, actually, we're willing to give you another 250 words; you can have a thousand words," which was the first time that ever happened to me, so I sent a letter back, not only explaining what was wrong with their analysis but I then went through and showed how they misquoted a bunch of sources [Glantz SA. "The Perils of Drawing Strong Conclusions Based on Underpowered Analyses." *Am J Prev Med*. 2022 Feb;62(2):e137-e139. doi: 10.1016/j.amepre.2021.09.010. PMID: 35000691]. And that's sitting there. They're going to publish that, and Siegel and Critcher's response [Critcher CR, Siegel M. "Cross-Sectional Analyses Can Evaluate the Plausibility of, but Not Validate, Causal Accounts." *Am J Prev Med*. 2022 Feb;62(2):e141-e143. doi: 10.1016/j.amepre.2021.09.009. PMID: 35000692], which is what should happen. [Their response did not engage my substantive criticisms of their paper.] I didn't demand their paper be retracted. I could have organized the campaign against it. I didn't. And that [our original] paper was fine.

07-01:50:19

And this whole retraction thing, there's a systematic effort going on, because there's another paper I published in another journal [Patanavanich R, Glantz S. "Successful countering of tobacco industry efforts to overturn Thailand's ENDS ban." *Tob Control*. 2021 Nov;30(e1):e10-e19. doi: 10.1136/tobaccocontrol-2020-056058. Epub 2020 Nov 23. PMID: 33229463; PMCID: PMC8141069] where there was a similar retraction push, where the journal didn't retract the paper, but it took a lot of everybody's time, including the *British Medical Journal*'s [publisher of *Tobacco Control*] lawyers. And then Bonnie Halpern-Felsher, who's a former professor at UCSF, now at Stanford, but she's part of our TCORS, she published the first paper linking e-cigarettes to COVID infection in youth [Gaiha SM, Cheng J, Halpern-Felsher B. "Association Between Youth Smoking, Electronic Cigarette Use, and COVID-19." *J Adolesc Health*. 2020 Oct;67(4):519-523. doi:

10.1016/j.jadohealth.2020.07.002. Epub 2020 Aug 11. PMID: 32798097; PMCID: PMC7417895]. And there was a push to retract that paper, which got fought back. And I know the guy—I don't know him real well, but I heard through a mutual friend—a guy from Africa where there was an effort to force the retraction of one of his e-cigarette papers. So there's clearly a systematic campaign going on to try to shut down the literature that's critical of e-cigarettes, because all these papers were about e-cigarettes.

07-01:51:34

But this, to me, just further highlights the anomaly of what happened at the *Journal of the American Heart Association*, because every other journal handled these criticisms by publishing the criticisms [except the *Tobacco Control* case, where the person urging retraction dropped the issue when the journal denied the retraction], which I think is fine, and the responses to the criticisms, and let people judge. And that's what *JAHA* should have done, and they didn't do. So I wanted that just to close that story out.

07-01:52:09

Burnett: Well, this is great. Let's continue next time.

07-01:52:12

Glantz: Okay.

Interview 8: October 7, 2021

08-00:00:15

Burnett: This is Paul Burnett, interviewing Dr. Stanton Glantz for the UCSF University History Project, and this is our eighth session, and it's October 7, 2021, and we are doing this interview from San Francisco. So last time we talked, we talked a little bit about your research career—in fact, the last several sessions—and I'm wondering if today we could focus a little bit on service: academic service to UC San Francisco, and service to other organizations. We've already talked about your participation, activism in tobacco control, but there are other projects like the [California State] Scientific Review Panel [on Toxic Air Contaminants] that we would like to focus on, as well. I should add that intermittently we will have—is it the Blue Angels who are rehearsing today? So there might be fighter jets overhead, and we'll adapt and adjust as needed. So I think the last time we talked about UC San Francisco service had to do with getting bioengineering going, and the next thing we might pick up is your participation and work on the Committee on Planning and Budget in the 2005-2006 six period. But there's a big gap in there. You obviously started the Center for Tobacco Control Research [and Education]. You were obviously really focused on a lot of things. Are there other things that I'm missing with respect to UC San Francisco academic service before that time?

08-00:02:16

Glantz: Yeah, there were several other things. One was I got the Biostatistics Teaching Group going, which grew into the Department of Epidemiology and Biostatistics.

08-00:02:29

Burnett: I think we did talk about that, yes.

08-00:02:29

Glantz: I think we did talk about that. There was a program, which is still going on, called the Science Education Partnership, which is now called the Science and Health Education Partnership, which was the first active collaboration between a university and a local school district to improve science education. It was started by a guy named Bruce Alberts, who was a Professor of Biochemistry. But there was a lot of concern over cuts to science education, the fact that it really wasn't that modern, and Bruce came up with the idea of the University partnering with the San Francisco Unified School District to improve science education in San Francisco, and I was asked by the administration to be his sidekick in getting that going. And a year or so later, he became the head of the National Academy of Sciences and took a leave from the UC faculty, and I ended up running the program for several years.

08-00:04:02

Burnett: And this is Bruce—

08-00:04:04

Glantz: Bruce Alberts.

08-00:04:05
Burnett: Oh, Bruce Alberts, okay.

08-00:04:06
Glantz: Yeah.

08-00:04:06
Burnett: All right.

08-00:04:07
Glantz: I'm sorry I didn't give you his whole name. And it was a very kind of grassroots-y effort, working with the teachers, and trying to figure out what the University could do to help them. And it was all a lot of very practical things, like there was a lot of old lab gear and other scientific equipment that, for one reason or another, was obsolete, or dates it expired on chemicals and things like that, and these were things that were [no longer useful for cutting edge research but were] still perfectly fine for teaching high school chemistry or biology, and so we had a system where we would collect that stuff and give it to teachers. There were training programs for teachers, lectures, programs where teachers could come spend summers in labs working with real scientists. One of my contributions to it was I came up with something called the Science Lesson Plan Contest, where older students would develop science lesson plans for younger kids, and then actually teach them. And we gave a prize for it, and a big trophy. And the idea was, well, the football team could get trophies to display in the schools, and we wanted the science nerds to be able to do that. And at the end we had a big assembly [at UCSF], where we brought all these kids together from around the district and gave out awards, and it became quite an event.

08-00:05:49
And another thing we did was the Smithsonian [Institution]—again, this was something Bruce had helped get going through his role, I think at the Academy, but they were developing [hands-on] science kits for fourth graders and elementary school kids, where you'd get a big tub, and it was like a whole week of science on something that they brought home, and we arranged to pilot some of them in San Francisco so that the Smithsonian could work the kinks out. And, in fact, my son then was in Boy Scouts, and as a service project for his Eagle Scout he organized a bunch of kids to assemble these kits. And my daughter at the time was in the fourth grade and actually ended up—her teacher got one and used it. And so it was a lot of fun, and I think it became a model for other universities all over the country and beyond. And after Bruce went to be the head of the National Academies of Science, he didn't have any formal engagement with the program, but he was in a very key position and was able to help facilitate stuff.

08-00:07:16
Burnett: He was really passionate, a lifelong passion for science education.

08-00:07:20
Glantz: Yeah.

08-00:07:20
Burnett: That was really his signature.

08-00:07:22
Glantz: So, yeah, I have to say, though, I got incredibly frustrated dealing with the school district bureaucracy. I mean, the teachers were great, and the principals were great, but dealing with the downtown—I remember with these science kits, the Smithsonian was enthusiastic about it. I arranged to get free labor to put them together. The modest amount of money for the stuff came from somewhere; I can't remember where. And the science teaching bureaucracy downtown at the School District said, "Well, we've got to think about this for a while, and it's going to take a year or two to deliberate." And it was like, "Hey! These are for fourth graders. My daughter's in the fourth grade. In two years she'll be in the sixth grade. I want this now." [laughter] And I remember meeting with Ramón Cortines, who was then the Superintendent, who was very good, and very supportive through all this, and he kind of put his foot down and told the bureaucracy, "You need to cooperate with UC and get this done," which we did, although it really pissed them [the SFUSD bureaucracy] off.

08-00:08:34
Burnett: Oh, yeah, I can imagine.

08-00:08:36
Glantz: But I did that for a few years, and then finally I just—I'm not good at those kind of [laughter] slow-moving bureaucratic—I mean, I'm good at it up to a point and then I kind of run out of patience. But the program is still going great guns, and it attracted national attention. And I think the University made a detectable difference in the quality of education here, by basically supporting the teachers. And one of the reasons the teachers really liked it, at least the teachers who self-selected to work with us, was they viewed us as an alternative to the district bureaucracy. So that was another big thing I did. And I think we talked about this, too: the Dean asked me to try to work with the Humanities people at the campus. Did we talk about that?

08-00:09:43
Burnett: No, I don't think so.

08-00:09:43
Glantz: Okay, well, there were two other—So the Bioengineering and getting Biostatistics organized were two successes. Two things where I didn't succeed—and I can't remember which one came first—there was a small program in I don't remember what they called it back then but today it would be called bioinformatics at UCSF, that was like three or four people, but it never quite reached critical mass. And we had attempted to get them interested in becoming part of Bioengineering, but they didn't want to do that, and then the dean [of the School of Medicine, Julie Krevans] said, "Well, could you sort of help build some bridges to Berkeley, and try to get that going more, get it up to a critical mass?" Because it never really, at least back

then, achieved its potential. But the faculty involved just were too narrow in their thinking, and it was like, "Well, what is this going to do for me?", and being very protective of their turf, rather than realizing that if you made it bigger everybody would be better off. And I worked on that for a while, and just people didn't want to play, and the Dean said, "You tried." And here we are, fifty years later, forty years later, and it's become quite a big thing, and computational biology and all of that. And I don't know kind of what happened in the middle; I stopped paying attention.

08-00:11:30 And then the other thing was there was a group of people working in the humanities and social sciences who were—It was a similar thing of everybody being kind of inner looking, rather than thinking that the whole could be greater than the sum of parts, and Dean [Krevans] said, "Well, you know, you're interested in that stuff, too, and seeing if you could get them together better." And he said, "I'm willing to put money in it." And they were always complaining they didn't have any money, and I kept saying, "Hey, the Dean said if you come up with a plan he'll give you money, so let's get a plan going." But the problem was everybody kind of was coming at it in their kind of narrow disciplinary focus, and they were fighting with each other about these things. Never have so many fought so much for so little. And I kept saying, "You guys are arguing about the differences between two different theoretical frameworks in sociology, but compared to the surgeons, the distance between you guys compared to you and the surgeons is trivial, so can't you get over this?" And in the end they didn't.

08-00:12:45
Burnett: So is that the program in the study of science, technology, and medicine, that kind of—?

08-00:12:51
Glantz: No, but now there is a department of—I don't know what they're calling it—medical anthropology and social sciences and stuff, and that's now a going thing, so I'm not saying that nothing ever came of it, but back at the time I was trying, back probably in the eighties, I just couldn't get them to move. And the thing that was different when you talked about bioengineering and the biostatistics thing is people there realize that in cooperating and in kind of reaching out and dealing with all of the complexities that come with that, especially between UCSF and Berkeley—they're hugely different corporate cultures, and you had the Bay in the way, and that was before BART, and one of the big things I talked the campuses into was creating a shuttle bus. [The administration asked,] "Well, what does that have to do with academia and papers?" I said, "Well, but if you could get back and forth without having a three-hour junket, it would be good." And that ran for several years until it became unnecessary because the public transit improved. But people were smart enough to realize that by working together you could get stuff that you couldn't do by yourself, and that that overcame the kind of natural inertia, and people just thinking about themselves.

08-00:14:43

And then the last area that I was involved in, on again off again, and also later, in a more formal way, through my work in the Budget Committee was in terms of public health activities—

08-00:14:59

Burnett: Yeah, we did talk about that.

08-00:15:00

Glantz: —okay, there's way more going on here, even, than at Berkeley, and I was involved in several efforts to kind of bring that together. But, again, the kind of narrow interests on the two campuses never could quite be overcome, although it's better. There's a joint epidemiology program now between UCSF and Berkeley, which is a good thing.

08-00:15:26

Burnett: Can you talk a little bit about the differences between the corporate cultures of UCSF and UC Berkeley? What do you think they are?

08-00:15:35

Glantz: Well, Berkeley is way bigger, and that matters. I think the level of distrust of the administration at Berkeley is way higher than it is at UCSF. I think kind of the default attitude of a lot of the faculty at Berkeley is anything coming out of the administration is inherently suspect, and I think UCSF especially, since such a huge segment of it is medicine, which is very hierarchical—there's grumbling about the administration, but I think there's a great deference. For example, I don't want to go rehash everything we talked about, about the complaints against me at the end of my career, but one of the people advising me in kind of how to think about this was a colleague from Santa Barbara who had been—I can't remember if she was just on or chaired their Privilege and Tenure Committee, but she looked at the misbehavior of the administration here, and in particular the violations of academic freedom, and just couldn't believe it. And her feeling—and who knows if people can predict human behavior—but she felt that had I made similar complaints about the administration's behavior at Santa Barbara, not only would I have been cleared but there's a good change the Senate would have sanctioned the administration for violations of academic freedom and violations of academic due process, whereas I think here the faculty was much more deferential and willing to put up with it.

08-00:17:39

Now, my view in all of this, especially back when I was doing the work jointly with Berkeley, I thought the Berkeley faculty were being a little too paranoid about the administration. At least when I was getting Bioengineering going, the Dean was kind of falling all over himself, like, "How can we do this?" What do you need?" And the Dean of the Engineering School at Berkeley, who I don't think I ever actually met but was being very supportive, although he knew who I was because he went to high school with my father-in-law, [laughter] and they were on the Stockton High track team together,

and used to get together at reunions and talk about me. But that's one of the big differences.

08-00:18:35 I think there was a lot of concern at Berkeley that the [UCSF] medical school was a fundamentally exploitative environment over students, and that the students from Berkeley, who were coming over here as we were developing the bioengineering [program], would get exploited. I mean, my experience was just the opposite on that one: I felt that the students here, and the Berkeley students who came over and worked here, the faculty were a lot more protective of the students than a lot of the Berkeley faculty, whose attitudes seemed to be, well, you're here at Berkeley, you're a grownup, get over it, [laughter] and don't coddle them, you know. And so that was another—

08-00:19:44 But the thing was, especially when you looked at Bioengineering—There were some difficult people on both campuses. So I think one of the things that really helped with Bioengineering was the UCSF faculty who were involved knew that being connected to an engineering school and having access to the expertise you have at an engineering school would just open up possibilities that there weren't the people at UCSF to do, and it was worth all of the aggravation associated with a cross-institutional collaboration to get that access. And I think the Berkeley faculty in the Engineering School realized they didn't have a medical school, they weren't going to get a medical school, and that getting access to the clinical environment and clinical realities and the stuff that was going on over here would allow them to do things they couldn't do. And certainly everybody didn't appreciate those things, but enough people did that it just let us get over a lot of inertia and political bumps.

08-00:21:10 But also, the thing that really let us launch the program formally was one kind of particularly obstructionist senior faculty member at Berkeley went on sabbatical, and then we got everything through. He'd been just standing in the way, and people didn't want to cross him. And, in fact, I remember they had some kind of celebration, I think, when the program was ten years old when I mentioned that story and mentioned the guy by name, which was like—[laughter] I got in a lot of trouble for that. And the people over here who didn't want to play just didn't play—

08-00:21:52
Burnett: Right. They didn't stick their noses in it.

08-00:21:53
Glantz: —so they weren't going out of their way to get in the way.

08-00:21:56
Burnett: Right, right.

08-00:21:59
Glantz: So those were the main things I can think of. But I wasn't involved until I got involved in the Budget Committee in academic shared governance in any big

way. I mean, I got appointed to a couple of committees. I was put on the Academic Assembly as a fairly junior faculty member as a way to kind of learn more about how the system worked. Later, when I served forever on the Committee on Committees, on the—

08-00:22:39
Burnett: Planning and Budget?

08-00:22:39
Glantz: No, not Planning and Budget, on the Committee on Committees. One of the things you did sometimes is put junior people in the Academic Assembly as a way to just start learning about systemwide in the broader university, and I was on a couple of committees but it wasn't a major focus until I got into the budget stuff. And the way that started was UCSF and Stanford came up with this cockamamie merger. There was a kind of fad at the time that merging hospitals was a way to save money, and also—and this is something people rarely talked about—get kind of monopoly power so you could raise prices. And UCSF and Stanford had a merger, and there were, like, four faculty at UCSF who said, "This is a terrible idea," and I was one of them. And I had a couple of reasons for that. One was I came from Stanford. I had spent two years as a postdoc in the Medical School at Stanford, and really knew the culture down there, and it was just totally different from UCSF. Totally different. I mean, UCSF, for whatever's wrong with it, saw itself as a public institution, and public service was important, and Stanford is an elite private institution, and it's just snooty. I ended up, because of the DoD work I did, being put as a student on the Committee on Research at Stanford, and after all the demonstrations there before I got to Stanford, as a result one of the things they did was agree to put students on the Committee on Research. And we had to have one open meeting a year, and a student—actually, a friend of mine who'd worked on the DoD report—got up—she was an undergraduate—and said, "My parents are spending a fortune for me to come here and I never get to see my professors." And I think it was the provost said, "Well, you've got to understand: when you come to Stanford it's for a taste of greatness, and for an undergraduate to expect more than a taste is unreasonable." I was like, give me a break. [laughter] And I just did not fit in. I mean, my [now] wife was a student at Berkeley at the time, when we were going together, and I felt so much happier at Berkeley, where just the traditions were different, the framing was different.

08-00:25:32
And then the other thing was UCSF, for all of its foibles, and the fact that then there were certain aspects of the administration and hospital administration that had a chewing gum and baling wire holding it together sense, but the place, it was one of the few academic medical centers in the country that was running in the black. And Stanford had a chronic deficit. The Stanford Medical School used to be in San Francisco, at what is now the Pacific Medical Center, and when they moved it down to Palo Alto and built a Stanford Hospital down there, it went into the red. And I don't know about

today, but the whole time from then till when I was there as a postdoc in the early seventies, it was running at a loss. The rest of the University was subsidizing the Medical Center, which is something a lot of people, by the way, in the Academic Senate leadership never realized is that the medical schools often are being subsidized by the undergraduate enrollment, which the fact that we don't have any undergraduates at UCSF to subsidize the Medical School is one of the kind of chronic financial problems that it has.

08-00:27:04 But to me, it was just sort of a fundamental—I saw two big problems, or three big problems, with the merger. One is that we're taking an institution, which is fundamentally financially sound—UCSF—and merging it with one that's not [financially] sound—Stanford—and putting Stanford in charge. I could never figure out why they did that. I mean, it just seemed stupid.

08-00:27:32 The second thing was this huge cultural difference. And one of the things that Stanford—They had developed fairly detailed protocols if some poor person ended up in an ambulance going toward Stanford to try to get them to some other hospital so they wouldn't get stuck taking care of them, because once they're in the emergency room under state law you've got to take care of them. And then the third thing was the snootiness factor.

08-00:28:03 And then the other problem was that they're just too far away for it to work. The guy who was the Head of Cardiology when I was a Cardiology postdoc was a guy named Don Harrison, who was a kind of wheeler-dealer type, and when he got passed over to be Chief of Medicine at Stanford—this is some years after I was there—he ended up moving to the University of Cincinnati and becoming—I don't know his exact title, but he was like the Vice President for Medical Affairs. And I went to the University of Cincinnati, and he knew that, and he invited me to come back there and give some lectures. And I remember being back there, and he said to me—they were still debating the UCSF/Stanford merger, and he said, "Well, what do you think about it?" Because he had just told me how he engineered this big, multi-hospital merger in Cincinnati, and he was very proud of it, and then after telling me all about it he said, "What do you think of the UCSF/Stanford idea?" And I wasn't trying to be disagreeable, but I said, "I don't think it's going to work." And he said, "Neither do I," which really surprised me.

08-00:29:27 But he said the reason the merger had worked in Cincinnati is they have a "pill hill," where all these hospitals were quite close together, and so if you could create some level of specialization between the hospitals, and if you had a woman in the OB/GYN hospital that suddenly had a cardiac problem, you could put her in an ambulance and have her to the hospital that did the cardiac stuff quickly, but Stanford's thirty-five miles away and, he said, you just can't do that. And so the consolidation of expensive services just wouldn't be possible for them. I mean, a little bit, yes, some super high-tech diagnostic testing or something like that, but basic things like the emergency services and the basic cardiovascular disease, OB/GYN, stuff like that, he said, "You're

going to have to be running two parallel services, and so what's going to happen"—and exactly what he predicted happened—"you're going to create another layer of bureaucracy to try to coordinate everything, and there's going to be a lot of fighting over resources, and it's just going to make everything less efficient." And—

08-00:30:44
Burnett: And so what year was that, roughly, or what—?

08-00:30:46
Glantz: You know, I don't remember, but it's easily—

08-00:30:50
Burnett: Yeah. We'll look at that. [The merger was in effect from 1996–1999. UCSF Committee on Academic Planning and Budget; member 1999–2002; chair 2002. Systemwide Committee on Planning and Budget: member, 2001–2004; vice chair, 2004–2005; chair, 2005–2006.]

08-00:30:51
Glantz: You can look at my CV. It was a couple of years before I got put on the Budget Committee. So I was one of, as I said, four faculty who were standing up in [UCSF campuswide] meetings saying, "This is stupid." And the other thing was while all the public rhetoric was efficiency, in the private meetings it was all about getting out from under the California Public Records Act and making gobs of money by creating a semi-monopolistic situation where they [the new UCSF/Stanford merged medical entity] could jack up prices. And the problem with that, in addition to being philosophically horrible, is that I think—and I may have the specific number wrong—between UCSF and Stanford, if you looked at the market for high-tech tertiary care, they had maybe a third of the market, because Kaiser was out there, Sutter was out there, and there are already some major competing systems. And thirty or forty percent of the market is not a monopoly position. So the whole thing, in addition to being philosophically horrible, was just economically stupid. [laughter]

08-00:32:08 And so I was getting up and saying that. In fact, I—And a copy of this ad I gave to the archive, so you could go get it from Polina [Ilieva, UCSF Director of Archives and Special Collections], but I was one of four faculty in a full-page ad in the *New York Times* that we'd put together, saying to the Regents, "Don't do this. This is a terrible idea." And then it went through, and I continued harping, and meeting with administrators and everything, because just all the bad things I was worried about happened." And finally, it got dissolved, and the administration admitted that they ended up losing something like $400 million on it, which means they probably lost a billion dollars. And it disrupted a lot of people's careers, especially among the staff. And it was very disruptive of the management of the Medical Center and the clinical services, because they had created this layer of bureaucracy, and then they had to undo it.

08-00:33:21 And so after all that happened, I went from being a kind of curmudgeon naysayer to an economic genius, [laughter] and Larry Pitts, who then was the chair of the San Francisco Division of the Academic Senate, called me up and said, "Would you be willing to go on the Budget Committee?" So that's how I ended up on the Committee on Planning and Budget, and then ultimately became the chair of it, at UCSF. And that was during a time that the whole decisions around Mission Bay were being made, and so I was involved a lot in that, although there I thought the university was pretty much—There were things we were suggesting tweaks to but that we didn't see it as a fundamental catastrophe. And then that led me to be being put on the systemwide [budget] committee, and ultimately chairing it, nominally for a year but de facto for almost two years, because I was in line to become the vice chair, and then the guy who was the chair—I can't remember his name but he was from UCLA—died very suddenly, and then the vice chair became chair, and I became vice chair. But the guy who became chair was a history professor from San Diego. And chairing that committee is a huge commitment, and normally you get some academic release time, but that's all things you've got to negotiate in advance, and because he suddenly went from vice chair, which isn't that big a deal, to being chair, there were a lot of meetings he couldn't make, just because it happened so suddenly. He still had to teach his classes. He still had other local commitments in San Diego. So I went to a lot of meetings on his behalf, because then, for me to go over to OP [the Office of the President] was like a BART ride. And my schedule was a lot more flexible anyway, because I was in the Medical School and didn't have as much teaching as on a general campus. So I was effectively the co-chair for that the better part of that year.

08-00:36:03 And I think I had a couple of other systemwide committee appointments—I can't remember—and then later I was on the Committee on Committees systemwide, on behalf of our Committee [on Committees]. And then I spent one year [2016–2017] as the vice chair of the [Systemwide] Committee on Committees, although by that time I was already starting to think about retiring, so I agreed to be the vice chair. But I said it was on the condition that I wasn't going to become chair.

08-00:36:33
Burnett: [laughs] Right. Well—

08-00:36:35
Glantz: Not that there's anything wrong with being chair, but I was already trying to kind of dial things back. I didn't tell anybody why [i.e. about the chronic lymphocytic leukemia], but I just said, "I'm willing to do this for service, but I don't want to be the chair."

08-00:36:53
Burnett: Well, in being on the Committee on Planning and Budget in the 2000s, those are not normal times—

08-00:37:03
Glantz: Right.

08-00:37:04
Burnett: —for the University of California's budget.

08-00:37:07
Glantz: Right.

08-00:37:07
Burnett: Can you tell me a little bit about that context? You're putting together a report in 2006-2007, but in the early 2000s there's a lot of churn in Sacramento about the fate of the UCOP [University of California Office of the President].

08-00:37:27
Glantz: Right. Well, you're talking about the systemwide Committee on Planning and Budget.

08-00:37:31
Burnett: The systemwide one, yeah.

08-00:37:32
Glantz: For many, many, many years, up until Ronald Reagan came along, the university was pretty well cared for by the State of California. I mean, every bureaucracy thinks it needs more, but if you look at the University's overall budget, or what we came to call the core budget—When you look at the University, you tend to hear talk about its total budget in the aggregate, which I don't know what it is now but at the time I was chairing Planning and Budget it was around $20 billion, I think, for the whole university. But there are many pieces to that that really need to be thought of distinctly. There's what we started calling the core budget, which was the basic cost of keeping the place open and meeting its fundamental teaching and public service missions, and some of the research. And that came almost entirely from the State of California. And it was funded enough that the University could really function pretty well, in terms not only of meeting the teaching needs, and be there as a public service institution oriented toward the people of California—which, as I said, was a palpable difference between a place like Stanford. And then, on top of that, there's the extramural research budget, from grants from the NSF and the NIH, and all the different places they give money to the university [as well as other things like the national labs, the hospitals and medical operations, the agriculture extension service, dorms, parking lots, and other "auxiliary enterprises"].

08-00:39:36 And that allowed the university to expand its activities, but one of the dirty little secrets of research funding that most people on the faculty and most people in the administration don't really appreciate is that the university loses money on extramurally-funded research, because the indirect costs are not fully covered. And if you want we could talk about that, but a lot of people think of indirect cost as this extra goodies that they're getting. And what that

is, for people who aren't accountants, is when you do a research project there are certain things that are direct costs, like paying the salaries of the people working on it, or buying stuff for the lab, or paying the phone bills to do research interviews and stuff like that, but then there's the indirect cost, which is like the cost of turning on the lights and having an accounting system and having a human subject system, and an animal facility, and all that stuff. And that adds up to—I don't know what the current indirect cost rate is. When I was paying attention it was around fifty percent, a little higher.

08-00:40:56
Burnett: It's fifty-eight now.

08-00:40:57
Glantz: Yeah, well, it was like fifty-four, I think. But people say, "Oh my God, so I put in a grant for $100,000 of direct costs and the University gets sixty grand, and that's terrible! I want that sixty grand." But the fact is the University's actually providing services for that, and those services cost money. And the problem is the administration, they view this as just cash. And so what ends up happening—and I think I talked about this a little bit, about why I set up the Tobacco Center the way I did—is when the university negotiates indirect cost rate with the federal government, they include things like the cost of departmental administration of grants, and even a little bit of money to pay people to work on the next grant, but then when the money comes in it's just green. So what ends up happening is that each step, going down from the President's Office all the way down to deans, they all take a little bit off, and in the end the departments get screwed.

08-00:42:11 But the other thing is, by federal policy, the indirect cost rate is set below the actual true negotiated indirect cost, because the government sees funding of research as a shared mission, and expects some cost-sharing by the universities. And that used to be much higher, and over the decades universities have whittled it down, but it's [the cost sharing] still there.

08-00:42:37 So there are two things about the research funding that are important when you talk about the University's financial health. One is that the University loses money on sponsored research, and donor research—research from foundations and research from rich people—it's even worse, because they pay none, or very low, indirect cost. So all of that is subsidized [by the university's general fund]. So it's [getting more research grants] not a way to solve the University's financial problems; it actually makes the problems worse. And if you have a situation where the University's core budget from the state is adequate, then, having a lot of sponsored research is a good thing, because you can think of it as taking a small amount of state money to make up that difference, and leveraging it, and drastically expanding the level of academic activity. But if you try to look at it as a way to pay the bills, it doesn't work.

08-00:43:48 So there's a couple things about that that were very important in terms of thinking about the University's overall financial health after things started to come unglued. One is you really need to disaggregate the budget, and thinking about financial planning for the institution. So you've got to take the sponsored projects and separate those off. And then, another thing that's very important is things like the National Labs, which amount to quite a lot of money, and those are kind of self-contained, but that's another thing where it's not clear whether the University makes or loses money on those. And the other thing is over time they became a bigger and bigger distraction, I think. And this is an argument I made during the time I was on and chairing the [Systemwide] Budget Committee, because there were a couple of scandals about the National Labs, particularly Los Alamos, and I kept saying, "Why are we even doing this?" Leaving aside arguments about nuclear war, disarmament, and all that, it just seemed like it just had become a big distraction at a time the University was under a lot of financial and other pressures, and why bother, you know? The federal government under Bush was saying, "We're going to make you bid for this." And David Gardner, who had been the president of the University last time this [renewal of the National Lab contract] went around, said, "Look, we're doing this as a public service. If you want us to do it, we'll do it. If not, fine."

08-00:45:34
Burnett: [laughs] Called his bluff.

08-00:45:35
Glantz: You know, "Find somebody else. We don't care." And Bob Dynes, who is a physicist who was president—this is one of the many things Dynes really screwed up, in my view—he was desperate to keep the National Labs. And one thing I learned from a friend of mine who's a great negotiator is he who cares least about the success of the negotiation usually wins, and Dynes was just desperate to keep those labs. And as the Bush administration made it more and more onerous, and required partnership with private business, and all this other stuff, it just was like, why are we doing this? And the other thing that happened is other universities were competing. The University of Texas was one of them; I don't remember the others. And over time, the competitors kind of dropped out, and I kept saying, "What do they know that we don't know? This is not a good deal." But that [the financial aspects of the national labs] needs to be separated out [when thinking about the UC budget].

08-00:46:35 And then there's the hospitals [and other medical service delivery systems], which are a huge enterprise but should really be thought of—The hospitals and the medical service operations, really, they need to be separated out. And then there's what are called the auxiliary enterprises: the parking lots, the dorms, all that stuff. Those are a separate thing. So what happened, as the University was getting hit with these budget cuts to the state core budget, the administration kept saying, "Well, it's only a five percent cut," but that was five percent on the big number. And what we started saying is you can't look

at the big number; you need to look at the core budget, at the little number. And so the cuts that Bob Dynes accepted from [Governor] Arnold Schwarzenegger, while he said, "This is a ten percent cut," or something—I don't remember the exact number—it ended up more like a thirty or thirty-five percent cut to the core budget. And the University, in my view, has never recovered financially from the mess he made.

08-00:47:49 And so, anyway when I was on the systemwide Budget Committee, the other thing that I just found astonishing was the way the University negotiated the budget with the Governor. The basic MO [method of operations] of the university was to cut whatever deal they could cut with the Governor and the Department of Finance and then blame the legislature for anything that was bad about it, but the budget people at UC at the time, the guy who had the job for many, many years, was a guy named Larry Hershman, who's a good guy, but his basic view of the politics of this was to cut the best deal he could with the Department of Finance and the Governor and then figure out how to live with it. And I came at this from my grassroots political activism background, saying, "This is stupid." We need to bring the public into this discussion, because the University, for everything wrong with it, still enjoyed a lot of public support.

08-00:49:10 And so what happened, the University kind of humped along; when Reagan came along, he forced the introduction of tuition, although it was at a very, by today's standards, trivial level. But that kind of breached the wall, because the State Constitution says the University's supposed to be tuition-free, so they call it fees, which is kind of baloney. Anyway, but that kind of humped along, and if you look at the University's finances over the years, when Republicans were in there they would kind of cut the budget a little bit and raise the fees a little bit, and then when the Democrats came in they would put more money in the budget and the fees would stabilize or go down.

08-00:49:58 But then things really started to turn south under [Governor] Gray Davis, who's a Democrat, and he got the state into the biggest budget mess imaginable because of electricity deregulation. And if you want I can go into that, but he blew a huge hole in the state budget because he screwed up the [de]regulation of electricity. And so the attitude he had, and the other people in Sacramento had, was they blew this huge hole in the state budget very quickly, and they were looking around where to get money, and one place was, oh, we can cut the University and increase fees. So that happened, and the University's attitude was like, well, we can't stop this, and we'll figure out later, we'll somehow recover from it, because in the past they'd always managed to recover. But then [Governor] Arnold Schwarzenegger came in as a very conservative Republican, although compared to the current Republicans he's like a communist. He was good on environment, good on gay issues, some other things, but on financial matters he was a dyed in the wool Milton Friedman supply side conservative guy.

08-00:51:29 And I remember Larry Hershman coming back after meeting with—And the person he [Governor Schwarzenegger] picked to head the Department of Finance—I think her name was Donna Arduin or something—she had worked for [Governor] Jeb Bush in Florida and was forced out by the Republican legislature because she was too hostile to higher education in Florida. So she comes in as the Department of Finance Director, and I remember Larry coming to a meeting and saying he'd had a meeting with Arduin, and she said, "The Governor does not understand why the University is paying anything to subsidize higher education, period, zero." He [Schwarzenegger] thought the right amount was zero.

08-00:52:13
Burnett: Why the state isn't paying anything.

08-00:52:14
Glantz: Why the state is paying anything? He doesn't think the state should be paying anything, because—and this is a standard, kind of conservative Milton Friedman/free-market-extremist argument, was that, look, by subsidizing higher education—we're not providing it as a service to the community; we're subsidizing it—we are artificially depressing the price of higher education. That means too many people are buying it, and we're educating too many people, and if we stop subsidizing public higher education the price would go up, and the market would equilibrate, we'd be educating the right number of people, we'd save money for the taxpayers, blah-dee-da-dee-da.

08-00:53:08 So that was what the university viewed itself as confronting, and they [the upper UC administration] were pretty scared. And so what happened, though, so Arnold came in, and proposed a gigantic—I don't remember the number, but it was a gigantic cut to the university. And the university responded, and I just found this amazing, but there was a tremendous consensus across the university, at all levels, from the students, the faculty, the administration, and the regents, and they said to Arnold, "Well, if that's what you're going to cut the budget to, then we're going to cut admissions, because we want to do a good job of educating however many students we have, and if you're not going to give us enough money to educate all those students then we'll just accept fewer students, and that's it." The university was very public about that, and, in fact, sent out two sets of admission letters that year. One set went to students that said, "Congratulations, you're going to get to go to UC next year;" and the other set of letters said, "Well, you meet our standards, and if we have an adequate budget you'll have a seat, but we can't guarantee that right now."

08-00:54:37
Burnett: [laughs] Call your Congressman now?

08-00:54:38
Glantz: Yeah. Well, I don't know if it said that, but people were—Or not your congressman, your state legislator.

08-00:54:45
Burnett: Your state legislator, yeah.

08-00:54:46
Glantz: And the situation just exploded. But the thing, to me, that was really interesting and encouraging was how it exploded. The media coverage, and the public discourse around it, largely was not getting mad at the university; they were getting mad at the Governor. And this was all up and down the state, in the liberal regions, in the conservative regions, urban, rural, Republican, Democrat. People were really mad at Schwarzenegger. And this crescendo was just growing, and I was sitting there watching this as somebody who, again, believes in grassroots politics, being like, this is just great. This is so exciting. We're going to beat Schwarzenegger back, and save the university, and la-dee-da-dee-dop. And I wasn't an active public participant in this; I was just watching.

08-00:55:46 And then, just as the thing got to a crescendo, Bob Dynes, the president, caved. He and the guy who was the Chancellor, the head of the Cal State system, buckled. And they entered in—And this was without talking to the Regents, without going to the faculty. This was a unilateral decision. I don't know about at Cal State, but Dynes just decided this, and he cut a deal with Arnold, which is called the Compact on Higher Education. You can go on the web and read it. And in it, he accepted a huge cut in state funding for the university of California, and this is why this core budget versus the total budget thing makes a big difference. And he agreed to huge fee increases, including higher fee increases for graduate students and professional students than for everybody else, and, again, all driven by this market model of if you're going to go be a doctor, you can afford to pay a lot more money because you're going to be rich. And these fee increases were baked into the Compact.

08-00:57:14 And this is an example I used to use in teaching statistics, about the difference between the mean and the median: it said, "We're going to increase fees"—because they couldn't call it tuition—"at the average rate of income growth in California." Now, that sounds reasonable, but the problem is there's this huge concentration of wealth among the ultra-rich, and over time there's an increasing concentration of wealth and income among the ultra-rich. So if you look at the mean rate of income growth, it was around ten percent a year—and had been for quite a long time—but most of that ten percent was going to people at the very top. If you looked at the median rate of income growth—that is, the income growth for the person who has the middle [amount of] income [when you list people in order of income]—that was stagnant or dropping. So the university committed itself to regular fee increases at the mean rate of income growth, which was like ten percent, which meant not only did it get much more expensive suddenly, but it was going to continue becoming more and more and more unaffordable [to most people], and that was in the Compact, written down. And then it said, we're going to make up

the difference with student fees and with increased philanthropy and research funding, and other sources of funding.

08-00:58:53 And he signed this, you know. I think if Dynes had just sat quietly and done nothing for two more weeks, the Governor would have caved [due to mounting public pressure]. But Dynes did this, and the university ever since that moment has been in a financial mess. And I'm good at math—I can add and subtract and use a spreadsheet—and I just couldn't believe it. And the other problem with the Compact, in addition to the philosophical problem—because it's a very ideological document: basically, Milton Friedman, free market, unrestrained laissez-faire capitalism—the numbers didn't add up, because the amount of fee increases that were written in the Compact was much less than would be needed to make up for the cuts to state funding. Again, I don't remember the specific numbers; maybe half. So it just blew this huge structural hole in the university's budget.

08-01:00:07 And one thing that I just couldn't believe is during these negotiations nobody put all these numbers [together] in the administration. They later told me. I asked, "Who put the Compact into Excel"—or Lotus 1-2-3 back then—"and just projected out what was going to happen if you just implemented?" And the answer was "nobody." And this whole idea that the difference was going to be made up—the fee increases weren't big enough to fill the hole, and then the fact that it was going to be made up with extramural funding and research, that wouldn't work, because the university loses money on that. And philanthropy's great; I got all that money to create the Tobacco Documents Library, and build the Tobacco Center, and all that is great, but the problem with philanthropy is the university loses even more money on philanthropy than it does [on federal government] sponsored projects. But, again, if you look at philanthropy as a way to expand activities, with a relatively small contribution out of the university's core budget, it makes a lot of sense, but if you look at it as replacing the core budget, it doesn't work. Because, again, if you look at the Tobacco Center, that's cost the university a little bit of money to provide the overhead operating costs, but for that it generated a gigantic amount of academic activity and the Tobacco Documents Library, which has changed the world. So the university, by putting a small amount of resources in, got a huge amount of benefit in terms of the university's core mission, but it didn't help the university's finances.

08-01:02:12 And so one of the things I did—So I was yelling and screaming and jumping up and down about this, and finally it's like, well, when I found out nobody had put the Compact into a spreadsheet I said, "Well, we need to do that." So we put a subcommittee together for the Committee on Planning and Budget to just project out what was going to happen under the Compact, and that led to a report which we called the Futures Report [*Current Budget Trends and The Future of the University of California*. Adopted by the UC Academic Council December 2006. Drafted and Submitted by The University Committee on Planning and Budget May 2006. Principal Authors: Christopher Newfield,

Henning Bohn, Calvin Moore. https://senate.universityofcalifornia.edu/_files/reports/futures.report.0706.pdf] where we just made the point that this was a disaster for the university economically, and as time progressed it would get worse. And the only thing we got wrong in the futures report is that the worst-case scenario that we assessed, which was called Option Four, ended up too optimistic. And what we said was going to happen was that the pressure to continue increasing fees even faster would continue to grow, because it was basically the only way that the university could cover the hole, and that the quality of the university was going to suffer, which it has, and access was going to suffer, and there would be growing pressure to admit more out of state students as a way to make more money, which would undermine the university's historic mission of educating California students, not that you don't want some out-of-state students, and it would, in the long run, undermine public support because their kids couldn't get in, and that's exactly what's happened. And that philanthropy and extramural funds wouldn't fill the hole, that it was creating a structural shortfall, that the university's core academic mission just was going to suffer.

08-01:04:24 And probably the most frustrating experience of my time chairing Budget was once a year the Academic Council, which is all the Senate divisional heads and the chairs of the major committees, meets [with all the campus chancellors along with the senior administration]. It meets every month, and once a year there was a meeting between the Council and all the chancellors. And the subject that the Council picked to discuss at this meeting was the Futures Report. So we're in this big room, with this giant table, with all the Council and all the chancellors except one showed up, and they went around the room and asked the chancellors, "Well, what do you think of the Futures Report?" And every single one of them said they thought it was a solid analysis, that they'd had their money guys look at it. There were a few little quibbles here and there, but basically we were right, that private fundraising and extramural funding would not solve the university's problems. And I'm thinking, "Well, this is really good; we got to all these important decision makers, and they understand the problem." And then they went around the room again and said, "So what are you going to do about it?" And they all said, "Well, we've got to redouble our efforts at private fundraising and getting more grants." It was like—[sighs] These guys, who were all very smart, and good people, just told me they know this isn't going to work, and yet that's what they're doing.

08-01:05:58 And I think the university's continuing problems all trace back to that fundamental mistake that Dynes made in accepting the Compact, and the continuing failure of successive administrations to be willing to accept that reality, and to continue trying to fix the problem with things that we just know aren't going to work.

08-01:06:26 And the other frustrations I had around this were the students, in trying to get them to understand the sort of ideological and structural nature of the

problem, all they wanted was to keep tuition down. And I can understand that, and I'm sympathetic to it, but you had to look at it in this broader context and say, "Well, yeah, we can make the university keep tuition [down] by just making the quality go to hell," which is what's happened. And a lot of the faculty didn't want to confront this stuff for fear that if the university's viewed as having a lot of problems, it'll make it harder to get people to come. But if you look at the battles over out-of-state students, which had become a tremendous problem for the university, it all traces back to that, and if you go back and read the futures report we said the one way to really jack up tuition is more and more out-of-state students.

08-01:07:45 And then the other problem that grew out of this was it created gigantic problems for graduate education, which we can talk—That was another big issue that we joined when I chaired the Budget Committee, which is related but it's a sort of separate problem we'll talk about separately. But I think that was still, to this day, one of the most important things we did.

08-01:08:13 And the other thing we did when we drafted the Futures Report is we then circulated it to a lot of important people in the administration and the Budget Office and things like that, and the members took it to their local campuses. And we did get a lot of kind of criticisms and things we needed to fix—it was a very constructive process—but the changes were all tweaks around the edges. Nobody argued with the fundamental conclusions. And, in fact, several pretty high-level people said, "Gee, nobody ever did this calculation before." And it's like, how could you possibly be making these kind of massive decisions without putting it into a damn spreadsheet and look at are you walking off a cliff?

08-01:09:06
Burnett: Well, is it possible that—

08-01:09:09
Glantz: So I went for a long time on that, but at least you got the—

08-01:09:13
Burnett: No, I really wanted you to.

08-01:09:15
Glantz: You looked interested, so—

08-01:09:16
Burnett: I really wanted you to, and there's several questions I have about it. Is it possible that these figures, including Dynes, were on the back foot already? It wasn't that decision on the margin, that all they had to do was wait two weeks and he would have blinked; it's this longer and multi-decade assault on the idea of public education in California, and in the world, and that it begins, as you rightly say, with Ronald Reagan attacking Berkeley and saying it's a bunch of ne'er-do-wells who are going there for free and getting working-

class, mostly white folks riled up about public anything, and "the government is the problem, not the solution," as Reagan often said.

08-01:10:08

Glantz: Yeah, well, that was definitely part of the context. And, in fact, Chris Newfield, who was a professor at Santa Barbara and was my vice chair, led the subcommittee that wrote the futures report, and is an expert on higher education policies, an English professor. In fact, he wrote a great book called *The Unmaking of the Public University* [Harvard University Press, 2011], where he looks at all that stuff in that broader political context. So, no, there was definitely—I mean, that was part of the problem; there's just no question. But at the same time, I think in particular the University of California had, and still has, an extremely positive reputation among the public. And, again, when the university sent out those two different sets of acceptance letters, I thought the shit was going to hit the fan, and I was waiting for the onslaught against the university. And there were some people who were mad at the university, but the broad public reaction was against the governor. And nothing is totally black and white in this, but there was a need—Gray Davis got money by screwing the university, because he desperately needed a little cash, but it was like getting some cash to fill the hole he blew in the state budget by screwing up the energy crisis. But Schwarzenegger came at it ideologically, and that was another big frustration that I had, and still have, is that I kept saying to the media—because I was getting a lot of press calls when I chaired the Budget Committee—that this is an ideological decision, it's [the Compact] an ideological document, and nobody seemed to really glom on to that and see that this wasn't just about the budget. This wasn't just about the fact that the state needed money. It was a real effort to fundamentally shift the nature of higher education.

08-01:12:38 And if you read the [Futures] Report, we talked a lot about the University of Michigan as a sort of alternative model, because they had gone to this privatized model way earlier. And, again, I grew up in Toledo, Ohio, which is thirty miles away from the University of Michigan. I even applied to the University of Michigan and didn't get in. [laughter] Even when I was in high school in the sixties, it had a reputation of a good school that rich kids from the East went to who couldn't get into the Ivy League, because they [the University of Michigan] wanted their money. That was the reputation they had when I was a high school student in the early sixties.

08-01:13:24 So you're right: there was this broader historical sweep, but [in] California, we were doing a little better than average on that. And who knows: it may be that if Dynes had stood up to the Governor and really mobilized public support, maybe Schwarzenegger wouldn't have backed down. But we had a gigantic battle when Pete Wilson was Governor about the tobacco funding [see Chapter 14 "Doing it Differently" in *Tobacco War* by S. Glantz and E. Balbach. University of California Press, 2000], which I think I talked about, and we forced him to back down, and I think that it could have been done with

Schwarzenegger, too. But the fact is that nobody tried, and, again, the way it just looked to me sitting there watching it is I think it would have been winnable.

08-01:14:20
Burnett: So there's three things [laughs] that are circulating right now. One is the claim about quality: the quality of the University of California has gone down. And just recently it was published that the University of California is the greatest, or one of the three greatest public universities in the world. Does that mean, then, that that whole scale has shifted down?

08-01:14:52
Glantz: Yes. Yes.

08-01:14:55
Burnett: So of those, yes, but University of Michigan, Oxford University, they're all going down.

08-01:15:00
Glantz: Yeah, yeah, all of them have been—Yeah. I mean, if you look at what's happened in England under the Tories, their higher education system has taken a huge hit, too. Yeah, I think that if you look at measures like the student: faculty ratio, if you look at measures like how big are the classes, if you look at measures like the amount of research funded by the university itself. When I joined the faculty, and in the early years, there was an active program of what are called multicampus research units, which really work to reach across the different campuses and build on the university's strength. Well, that program is still around, but it's a small shadow of itself. And if you look at the size of sections, if you look at how competitive are the graduate programs—Again, another of the big issues that I dealt with as chair of the Budget Committee was graduate education, or funding for graduate programs. It was cheaper—and this was, what, fifteen years ago—to go to graduate school at Stanford than Berkeley or UCSF, if you were a student.

08-01:16:29
Burnett: I went to the University of Pennsylvania. I got in to UC San Diego, and I went to Penn, because they offered much better support. They offered support, versus little or no support.

08-01:16:41
Glantz: Right, right. And that's a gigantic problem. And they've had to close a lot of graduate programs, or drastically cut them back, and that's really the defining thing about the university is not the undergraduate but the graduate programs, and those have suffered terribly. Now, some of them are okay, the ones that can bring in a lot of philanthropy or extramural funding or things like that; it's really helped. But if you look at the areas that aren't in right now, or don't have external largesse, they're in terrible shape. And it's the old you put the frog in the pot and heat the water up slowly. One of the guys—I'm trying to remember his last name; his first name was Cal [Calvin Moore]—he was a

math professor from Berkeley, and he and I argued a lot on the Budget Committee about a lot of these issues although not everything. But I remember after a while—he was a leader in the local [Berkeley] Senate—he made a public statement that the university was being hollowed out, and this was a guy who'd been kind of viewing me as too crazy. And, boy, did he get yelled at for that. But he was absolutely right.

08-01:18:13 And things like I think the public service mission of the university, and people having time to do public interest research, or things that the State of California needs, people have less time to do that kind of stuff. So I think if you go back and compare my experience of UC as a postdoc and a junior faculty member, and compare that to people in comparable positions today, it was way better back in the old days.

08-01:18:54
Burnett: Well, maybe there's a way of seeing your attitude—you come from a grassroots organizing background; you chose to work at a public university, because you believe in the mission of public service of a public university—versus a kind of public-servant mentality. Right? The idea that a university professor or administration executive is a nonpolitical public servant, and it's kind of verboten to advocate—I mean, of course they advocate for the university, that's not a problem, but to sort of go around the kind of regular channels, and mobilize public opinion against a governor or against the assembly would not be done, I would think, right? What do you say to that kind of—? Is that true?

08-01:19:59
Glantz: Well, I think people did it in the olden days. This is before I was paying a lot of attention to these things, but I was told David Gardner, when he was the president of the university, in a pretty public way took on the powers that be. And I think we also had a kind of extraordinary situation, and it's just—I mean, I can tell you, having been in these fights, and having been the object of the scorn of important people, it's hard. It's really hard. But the thing that amazes me the most about the whole thing, though, again, was getting back to the point that they didn't put the numbers in a spreadsheet. And I think had Dynes and the other university leadership—And it was a very small group of people, because the regents were really pissed off about the Compact, because he just did it without talking to them, at least, or so I heard. If Dynes had said, "Okay, this governor's very popular; the economy is crappy; I realize that I'm making this very fundamental change to the whole nature of the university, and putting us on a fundamentally unsustainable path, but it's the best I can do and I'm willing to do it and take responsibility for it," then you could say, okay, the guy made the wrong decision but he didn't give a damn, or he said this is all he could do or something. But nobody did that calculation. And people make mistakes all the time—I could go on for five days about everything I've ever done wrong—but it was just such a monumental mistake.

08-01:22:06 And the other thing is the failure of the subsequent university leadership to really accept what happened, and to realize these numbers have to add up. And, to me, again, with the Chancellors, to go around the room and have them all say, "Yes, your analysis is correct, your predictions are correct, and we're going to keep doing the thing that you've just convinced us won't work," it was amazing. Rather than saying, "Okay, well, we're going to just have to eat the fact that the place is going to deteriorate."

08-01:22:53
Burnett: Well, I was going to say that we're living in a time of acquiescence to unsustainable paths, right? [laughs] That's part of the problem.

08-01:23:05
Glantz: Well, today people are trying to break out of that, I think. Now, whether they'll succeed, who knows, but at least there's an appreciation of those realities. But, again, if you look at the debate over higher ed, and the idea of making community college free, and stuff like that, it's still too focused on tuition. You really need to look at both the cost and what you're getting for that money. The universities haven't done a good enough job of tying those two things together, but you want to have high quality, too, and the quality just isn't up where it used to be. Some UCSF and UCSD professor just won the Nobel Prize, so I'm not saying that everything that's going on is worthless, but I'm talking about the system writ large. Anyway, I'm just repeating myself, but—

08-01:24:18
Burnett: Well, your identity as a researcher and an activist or a fuller human being beyond just being a professor or a scientist, you see that this is connected to a larger purpose. I think that's fair to say. Well, you can debate that if you want, [laughs] but let's—

08-01:24:43
Glantz: Yeah, whatever. Oh, I would agree with that.

08-01:24:45
Burnett: Okay. So you do something after this that's interesting, and I'm not quite sure: it's years later, but it has to do with your time as the president of the Council of UC Faculty Associations. So tell me about that institution and your involvement in it, and then tell me what you ended up leading as part of that work.

08-01:25:12
Glantz: Okay, but we'll need to come back to the graduate education thing. Well, let me talk about that first, because this all happened—So one of the other really big issues during the time that I chaired Budget—and it wasn't just then; it had been growing for several years—was the problems with financing of graduate education. Because graduate and professional education is really the unique mission of UC when you look at the California Master Plan, and there had been just ongoing cuts to that, and it was made way worse by the Compact,

which imposed even bigger increases in graduate fees than undergraduate fees. And the view of the sort of political part of the administration and the budget people—and they were right on this, I think—was that the legislature doesn't really care about graduate education and research. It cares about undergraduates, and fees, and trying to go and defend graduate education and professional education is really hard, and so it tended to always get short shrift, even though it's really a key thing that makes the university unique in California.

08-01:26:47 And there was this problem of—and you just talked about it yourself—the thing that the whole graduate enterprise and most of the research enterprise is built on is the students: the graduate students and the postdocs. And the whole key to having the best graduate programs is having the best graduate students, because then the professors—and I'm not minimizing the role of the faculty, but by having the best people to work with, they're like force amplifiers, and they're the ones who kind of do the day-to-day work of moving things forward. And if you have good mentoring and smart people in the faculty, then you can maximize the contribution that these students make, and help move them along in their careers and stuff like that.

08-01:27:51 Well, the way that the politicians looked at it, and the university kind of was willing to go along with this, was like, well, these guys could pay even more money. But when you're talking about graduate programs, to get the best graduate programs you've got to give them fellowships; you've got to give them fee waivers. And so increasing graduate fees was basically budget cuts. And so what ended up happening, if you look in the sciences, the main places that people get the money to pay the graduate students is off of research grants and training grants, and some departmental funds, but research and training grant. Well, those pay a stipend to the students, and then they pay their fees. Now, at a time when the fees were a couple thousand dollars a year, the fees were like, who cares? It's like down in the noise. But as the fees got bigger and bigger and bigger and bigger, that meant the money to pay those fees had to come from somewhere. And where it came from in the sciences, where you had these extramural funds, is two things: one is fewer students, because if they went from costing a couple thousand dollars a year to costing fifty thousand dollars a year you just didn't have enough money to hire them; and the second thing is it put downward pressure on [graduate] student stipends. And so it made the stipends that UC could pay uncompetitive compared to a lot of other places. And then, in the humanities, where they don't have a lot of extramural funding, the place they get the money is out of teaching assistantships, so the graduate students get paid to do some teaching, and that helps. And then there's some other departmental funds for research and stuff, but when you jack the fees up that means you don't have as much money, you can't hire as many graduate students to teach, and it also puts downward pressure on the stipend.

08-01:30:10 So you end up with the situation you had, where, well, you got into UC, but they didn't give you any money, so [you] go to Penn. And that was happening broadly. And once upon a time, the UCs would get their first choice [among graduate student applicants]. When they admitted a student, they came. And what happened was they [the UC departments] were not getting their first choices [among graduate student applicants] anymore. The sizes of the programs, a lot of them, were shrinking, and some of them were closing, because they just didn't have the money for the students, or students of the quality that you would want. And so the Planning and Budget Committee, along with the Graduate Council, which is another Senate committee, were putting pressure on the administration to do something about this, and to do a study.

08-01:31:07 And we finally, during the year I chaired the Committee, got the administration to agree to a joint faculty/administration committee on funding of graduate education, and I had the ability to appoint one or two people—I can't remember how many—to this committee, and I appointed myself and somebody else, maybe. And this was a very high-level committee, and the Graduate Council had people on it; Larry Hershman, the vice president for Finance was there; I don't remember what they were called, but the head of all graduate education; we had a couple graduate deans on it; other financial people. And it was, I believe, an evenly divided committee between faculty and administration. And there were a lot of arguments in this committee. It was like putting the Democrats and the Republicans in the same room and saying, [laughs] "You guys agree on something." And the view of the faculty was, "This is a crisis, blah, blah, blah," and the view of the administration was, "Yeah, we understand, but we don't have any money."

08-01:32:25 And I can't remember who chaired the committee, but they did a good job, and we came out with a consensus report that was pretty good, that said this is a crisis for the university, that this needs to be given top priority—and this is the key part—even if it means cutting something else [Final Committee Report and Recommendations to the Provost: Competitive Graduate Student Financial Support Advisory Committee. June 2006. https://www.ucop.edu/enrollment-services//data-and-reporting/graduate-student-support/gradcommittee-2006.pdf]. This needs to be at the top of the list, because this is so central to the unique mission of the University of California that this has to be solved. And we felt pretty good about it. I mean, everybody didn't get what they wanted, but it was a really strong report, and everybody signed off on it, and then it went to Dynes, who said, "Well, I don't think the faculty will go along with this," because it was even prioritizing this over faculty salaries, I think.

08-01:33:21 So they had a systemwide vote of the entire faculty on whether or not to implement the recommendations in this report, and every single campus voted to support the report. It was amazing. And then it went to Dynes to implement, and he just said, "I'm not doing this." Just like, phooey on you.

And I just thought that was another of his many gigantic blunders as president. And, again, I think if you compare where graduate education was at UC twenty-five years ago, or thirty years ago, compared to today—this is a problem everywhere, but I think UC is doing much less good than it was.

08-01:34:18 And the other thing—and this is an argument that I think the university should have been making more publicly, and with the politicians—is, okay, for undergraduates, we should take a few out-of-state students, because it brings diversity, it brings other perspectives, and a few international students, it's good, but the University of California and our primary mission is educating people in the state of California. But for graduate education, the distinction between in-state and out-of-state is silly; you want the best people. And graduate programs are a way to steal brains from other places. And historically this has been a tremendous way to bring the best, smartest people in the world into California, and most of them stayed. And that is just not as much the case. Many more people are much more open to other places because of these problems. And, again, I think we had a vote, a systemwide vote of not just the aggregate faculty but every single campus said, yes, we agree, this needs to be prioritized, and then Dynes didn't do it.

08-01:35:48
Burnett: Well, tell me about this kind of—

08-01:35:50
Glantz: That was a little bit like getting the Taliban and whoever doesn't get along with the Taliban to sit down and agree to something, and go to the United Nations and say, "We've agreed that we're going to do this for the better place for Afghanistan, even though we know it's going to have a cost, and we want the United Nations to implement it," and have the UN say, "We don't care that you agreed. We're just not going to do it." So, anyway. But then the Faculty Associations—Did you want to say anything about that?

08-01:36:28
Burnett: No, I wanted to then—

08-01:36:29
Glantz: So the Faculty Associations had been around for a long time, and they started kind of as a quasi-labor union, and, in fact, at [UC] Santa Cruz they are formal representatives of the faculty. But they were developed, I think, back in the seventies—I'm not positive of this, but somewhere a long time earlier—to try to give the faculty an independent political voice, mostly to support the university, because under the university's rules, as a faculty member, I couldn't go and lobby the legislature.

08-01:37:15
Burnett: That's what I was going to clarify with you. So there is a public service injunction for faculty to advocate on behalf of the university, or themselves, at the state legislature.

08-01:37:28

Glantz: Well, no, as a representative of the university. I mean, there's no limitation on what you do as a citizen—you have the same rights as any citizen—but in terms of going out and representing the university's position on X, no, you can't do that. The president can do it. The chancellors can do it. The regents can do it. But for a faculty member—and I think this is an appropriate rule—we can't go up to Sacramento and say, "The university thinks this." I, as somebody who had a lot of public interactions, could go and say, "I, as a professor at the University of California think this; I, as an expert, think this," but I could not say "The university thinks this." There's a very short list of people who are authorized to do that. And so, as an individual faculty member, I could go to the legislature or anybody else and say, "I think you should support the university," or, "I think you should do this or that," but there was no formal structure to do that.

08-01:38:45 And so the Faculty Association initially grew up to create an independent voice for the faculty, where your role as a member of the faculty was evident, because it was that University of California Faculty Association, but we were independent, as an independent legal entity. And the faculty associations on the different campuses—and then there's this thing called CUCFA, the Council of UC Faculty Associations, sort of a loose coordinating body—and they would kind of ebb and wave depending on what was going on, but during the fight over the Stanford merger the UCSF Faculty Association got quite active. And so I got involved with the Faculty Association, because they were saying this merger is a terrible idea, and all of that, and then continued being varying levels of activity.

08-01:40:02 Now, the faculty association at UCSF—and this varied across the different campuses—we had a very cordial relationship with the Senate, and, in fact, some of the same people were in leadership roles—I was one of them for some of the time—and where we could go do things and say things that the Senate, for one reason or another, either couldn't say or didn't want to say. And, for example, there was a big fight inside UCSF about consolidation of research services, and research administration centrally, and a lot of the faculty thought that was a bad idea, and so the faculty association went out and did surveys of the faculty saying, "What do you think about this?", and "What do you think the right way to solve these problems are?" And so we could go do the surveys, and then—In fact, I led a couple of those, because I know about how to do surveys, and the Senate said, "Come present this at Senate meetings."

08-01:41:11 Anyway, so that was sort of how I got into the faculty associations. So if you sort of put that aside for a minute, the way I ended up the president—And I ended up being elected to the board of the systemwide CUCFA, just because they needed somebody to do it and I was willing to do it as the UCSF rep initially, but it wasn't like there was a huge battle over it. It was like, who's willing to do this? But, at the same time, things [at UC generally] were

continuing to deteriorate because of the Compact. The guy that I worked with on a lot of my anti-tobacco advocacy, most recently in the smoke-free movies campaign, was a guy named Jonathan Polansky, who's an advertising/social marketing guy, and super smart guy. And I would be on the phone with him, talking about the smoke-free movies thing, but then I would start obsessing about the Compact. And Jono was a very practical social marketing guy, and he said, "Okay, okay, okay, okay, okay. I know this is billions of dollars, but what would it cost *me* to fix this, not the State of California, not the aggregate, but what would it cost *me*." And so we had all the earlier calculations, and so we just said, okay, well, there's different ways to pay for it, and one way to do it would be to just do an income tax surcharge, which would be the simplest thing to do, and the California income tax system is progressive, so I like that. And we figured out that the cost—And we said, we don't want to just fix UC; we want to fix everything [i.e. the whole public higher education system, including CSU and the community colleges], because most families don't have kids in UC. They have them in Cal State and the community colleges. And so what would it cost to get rid of tuition for everybody and restore the quality measured as per student funding to where it was pre-compact.

08-01:43:39 In fact, to go back to before—we use the year 2000, so it was before Gray Davis, too. And it turns out it was several billion dollars—four or five billion dollars, I think—but there's thirty million people in California, which means it's like ten or fifteen million families. And so if you amortized it out, the median taxpayer would have paid like thirty bucks. And it's just a whole different thing to go out and say to the public, in public discourse, "Do you think the state would spend five or six billion dollars fixing higher ed and making it free and all that?" versus "Do you think the median family in California should pay thirty bucks to do all this?" You get a totally different answer on the second question. People say yeah. I mean, they're shocked it's so cheap.

08-01:44:41 And so I ended up working—At the same time, the faculty association was part of a coalition of UC labor unions to try and improve the lot of UC employees, and improve the situation around higher education funding, because they were smart enough to know the only way to get the unions, to get their members more money, was to get the university more money. And so they were willing to get behind this. And then Bob Meister, who was a professor at Santa Cruz had retired, and he stepped down as the president of CUCFA, and they asked me if I'd do it, and I said yes, because I thought this would provide a platform to push what became the $32 fix, and then I think it went up to forty—

08-01:45:44
Burnett: Eight.

08-01:45:44
Glantz: —forty-eight, because people said you need to add in Prop 98, which says half the state general fund revenues have to go to K-12, and the initial thirty-two dollars was just to fix higher ed, and then you add in the Prop 98 thing, it pumped it up. And then so Eric Hayes, who was the staff member [executive director] for the CUCFA, was a numbers guy, and knew how to read budgets and use spreadsheets and stuff. So he and I went and took my kind of back-of-the-envelope calculations, and updated them and made them right, and then I convinced the other partners in the higher ed coalition, and then I put some money in from CUCFA, and we produced this report, which became the forty-eight dollar fix report. [As of 2018 it was $66. See http://66fix.org/wp-content/uploads/2018/03/Master-Plan-Report-Mar-2018-web.pdf.]

08-01:46:54
And the most amazing thing: I don't think I ever went to anybody—I mean, my standard question was, okay, higher ed's a mess; access it getting to be a problem; quality is getting to be a problem; it's too expensive; if I were to say, let's snap our fingers and make it free, accommodate every eligible student—because a lot of people have just been pushed out of the system—and return the per student funding, adjusted for inflation, to where it was back when everything worked, how much would it cost the median taxpaying family? I never had anybody who underestimated the cost. Most people would say five hundred dollars, a thousand dollars, two thousand dollars. When you say to them thirty-two dollars or forty-eight dollars, they go, "What? I'd do that."

08-01:47:50
Burnett: But what about the—

08-01:47:50
Glantz: Now, if you're rich it would be more money, but still.

08-01:47:53
Burnett: Well, say the ten percent, the top ten percent, what would you be paying if you were in the top ten percent income bracket, roughly?

08-01:48:01
Glantz: You know, I'd have to pull the report out and look, but it would probably be a couple thousand dollars. [I overestimated the cost. The numbers in 2018 were $600.87 to restore higher ed and $957.08 including Prop 98 required funding for K-14. See page 25 of http://66fix.org/wp-content/uploads/2018/03/Master-Plan-Report-Mar-2018-web.pdf.]

08-01:48:08
Burnett: Still, not the end of the world.

08-01:48:09
Glantz: Not the end of the world. I'd have to look at the report, but I think the people at the very top, it was like $20,000 a year. [For families with taxable income of $1-2 million, the numbers were $16,616.65 and $26,467.19. For families making over $5 million the numbers averaged $244,515.70 and $389,467.37.]

But it's just not that much money, and then you could just fix the problem. And it talked about the ideological nature of the compact, which I still think is—People need to appreciate—It just drove me nuts, because every year the regents would raise fees, in accordance with the Compact, and every year it was presented as a response to the [immediate current] budget crisis, and every year I would say, "No, it's not a response to the budget crisis. This was a political, ideological decision to shift the cost of education off the taxpayers and onto the students and their families, and you need to think about that and not just fight this every year, this very narrow fight about what's the fees going to be. You need to look at it in the broader context." And it's still going on today, where the regents said, "Okay, we're going to have fixed fee increases every year," but they made it a little better because when you go in it's fixed for five years for you, but every year the money goes up, and it's just more of the same.

08-01:49:30 And it's a fundamental rethinking of higher ed from being a public good, where we educate everybody because it's good for everybody, to a private good, where it's a service you buy because you're going to make more money later. And you look at like the [PBS] *NewsHour* had a thing, like, "Is it worth going to college?" And the idea that having an educated public is good just gets lost; it becomes a very individualistic financial decision. And people say, wow, but you're making people pay more taxes. It's like, well, yeah, okay. I think Bernie Sanders [2020 presidential campaign] has advanced the discussion by saying, "Yeah, it's okay to make people pay taxes." But it's like, well, why should I pay taxes for these rich kids? That's the argument.

08-01:50:26
Burnett: Yeah, the populist version of it.

08-01:50:27
Glantz: Well, my answer is, "No, no, the rich kids are going to pay more taxes [just] later." What we have is a system now where we take people who are least able to afford it when they're young students and drive them hopelessly into debt, which then costs them a fortune in interest, and so they're paying it back many times over to the banks, whereas what I'm saying is let's educate them for—well, it's not free; they still have to buy books and stuff—but we'll educate them for free, and then if they go out and get rich, God bless them, they'll pay more taxes. So you have to pay the bill sooner or later, but it's a question of, "Well, we'll pay the bill later when you have more money," rather than hitting people up [before they earned the money].

08-01:51:20 And the other thing that happened during my tenure on the systemwide Budget Committee was this idea of really driving students into debt. I mean, when I graduated from college I was broke, but I wasn't hideously in debt the [way that] people are now. And even at the time before the Compact, student debt was much lower than it is today—I don't remember the numbers but it was a few thousand dollars on average—and now it's gigantic. And everybody

recognizes that's putting a huge drain on society, in addition to the individual people whose lives get screwed up. And I remember having debates in the [Planning and Budget] Committee of should the faculty get behind this, and it's what UC calls the high-fee/high-aid model. And there were some people who said, why not? They're going to get a degree, make more money, blah, blah, blah. And there were other people like me who said, I just think this is stupid and unethical, and you're basically giving a lot of money to banks, because who's collecting the interest? But it was, again, "We have no choice."

08-01:52:43 And UC at least didn't enter into—and there was some talk of this, but the faculty did fight this back—any agreements with debt with banks and loaning programs where the university would steer people into them and then get a commission, which maybe that's happened since I was on the Committee, but there was discussion of, well, this is another way for UC to make money, and it was like, "No." I mean, as desperate as we are, we're not going to do that.

08-01:53:16 But I still think if you look at the debate over higher ed funding, these ideas still—We're closer to them than we were, thanks to Bernie pushing the idea of free college, but it's still—One of the criticisms we got of the way that we wrote—we called it Keep California's Promise, which was Polansky's idea—was, but you're increasing everybody's taxes, because we're doing an income tax surcharge. Now, the people at the bottom who don't pay any taxes wouldn't have had much of an increase, and the people at the top would have big increases, but I felt like that—and this is something Sanders said in the presidential debates—everybody should kick something in. But it was still cheaper for the great bulk of people to pay a little bit more in taxes so they could—And if you look at it now, a bunch of my colleagues at UC, who in the last few years most of their kids are going out of state, because it's cheaper. It's crazy.

08-01:54:39
Burnett: You mentioned that Milton Friedman was this *éminence grise* behind all of the ideological rationale for it, and that the economic rationale comes from him, but there were any number of Chicago figures, Chicago economists, during the time he was there, including the man who hired him, who produced reams of studies showing the public dividends to public investment in education, that benefit the private sector; it benefits the citizenry; it benefits the public; it yields technological advance, far in excess of some kind of model of a private university on its own. So it's something in the zeitgeist that shifted, and very, very clever marketing to appeal to the hopes and fears of people that produced a kind of model of higher education that is unsustainable, and we're still dealing with it. You mentioned CUCFA a number of times, and the acronym is for the—

08-01:55:45
Glantz: CUCFA, the Council of UC Faculty Associations. That's the statewide—I don't know if "governing board" is too strong, because it's really a confederation.

08-01:56:00
Burnett: And this was recently. So you were president from 2015 to 2019.

08-01:56:04
Glantz: Yeah.

08-01:56:04
Burnett: And the 2018 report that came out that was the ultimate version of these previous versions was called the $66 fix, Reclaiming California's Master Plan for Higher Education, so alluding to Clark Kerr, and the original idea of a democratic conveyor belt that you would get.

08-01:56:24
Glantz: Right. And the other point we made—I mean, the idea of focusing on the Master Plan was something that the unions were pushing, but we hadn't thought of framing it that way initially, but then, yeah, that makes a lot of sense. But the other reason that it was good to really focus on the Master Plan was one of the arguments you get back over things like what we were proposing is, well, this is all pie-in-the-sky, leftwing, crazy thinking; it could never work. Well, that's not true. It [had actually] worked. We had an existence proof. It worked very, very well in California for years and years and years and years. So we were saying, again, if you listen to the language, we were returning to something that worked, not proposing some new, radical change. It was like going back to the old days.

08-01:57:20
Burnett: Well, the theme of this session was service, and we talked quite a bit about academic service, and this broader service to the State of California and its citizens. But you were also, for many years, part of Cal EPA's Scientific Review Panel on Toxic Air Contaminants, as part of the—Well, I'm wondering: there is something about secondhand smoke. You did two rounds of research on that. Can you talk a little bit briefly about the kind of work that you did for that, and maybe some parallels to other kinds of struggles over the evaluation of the science with respect to other toxic air contaminants?

08-01:58:13
Glantz: Well, there's a law in California that passed, I think, in the early eighties maybe, maybe late seventies, early eighties, called AB 1807, which created the state air toxics program. [Assembly Bill 1807 (AB 1807) (Stats. 1983, Ch. 1047; Health and Safety Code section 39650 et seq., Food and Agriculture Code Section 14021 et seq.), was enacted in September 1983. It established procedures to identify and control of toxic air contaminants (TAC) in California. AB 1807 defines a TAC as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which

may pose a present or potential hazard to human health (Health and Safety Code Section 39655a).] And it was a very forward-looking piece of legislation, and that's what created the Scientific Review Panel on Toxic Air Contaminants [SRP]. And the idea between AB 1807 was that the state ought to be doing something about toxic air contaminants. There were laws about what are called categorical pollutants, things like ozone and things that make smog, but toxic air contaminants are other things: formaldehyde, or benzine, or perchloroethylene, or things like that. And so the law charged the California Air Resources Board with regulating these toxic air contaminants, identifying and regulating them, and the Department of Pesticide Regulation was dealing with pesticidal uses. And it laid out legal standards for what would be considered a toxic air contaminant, and basically it had to be in the environment and toxic. [laughter] And it charged these agencies with regulating these things, and it created this committee to review the scientific evidence on specific toxins.

08-02:00:04 And the committee, I can't remember if it has nine or eleven people [it has nine members], but they're from different disciplines, and I was appointed to the biostatistics seat. There are experts in epidemiology, biostatistics, oncology, toxicology, atmospheric chemistry, [occupational medicine, biochemistry/molecular biology, pathology and academic administration], very specific areas. And it was structured in a way that really depoliticized it. Some of the members are appointed by the governor, some of the members are appointed by the State Assembly, and some are appointed by the State Senate. I was appointed by the State Senate. And you serve for a three-year term, and the role of this committee was to basically determine whether—the state was to prepare reports—and then it came to this committee, and the committee was to determine if the report was scientifically adequate. I can't remember the specific legal term. And the appointment to the committee was done in a way to really try to depoliticize it. So most state committees, the appointing authority just appoints somebody. For the SRP, the president of the University of California nominates three people for each seat, and certifies that they have the technical expertise, and then the appointing authority has to pick from that list. So it just meant they [the appointing authorities] couldn't pick some friend of theirs, or somebody that industry liked, or some interest group liked.

08-02:01:51 And the committee's job was really to talk about the science, and we weren't involved in regulatory decisions. Our job was to [assess whether the scientific evidence supported] saying, "Yes, we agree that this compound meets the legal definition of a toxic air contaminant;" we had to come up with some quantitative estimate of the risk; we had to make a ruling as to whether there was a threshold effect some level below which you don't have to worry about it; and to make some comment about the level of certainty in the evidence. And one of the things in the law that was really amazing in hindsight is it specifically said uncertainty is okay, that we want the committee to speak to uncertainty, but the fact that there is uncertainty is not a reason for not listing

something and acting on it. And so I was appointed, I think, in 1983, maybe—You should check, but maybe eighty—

08-02:02:57
Burnett: Eighty-six?

08-02:02:58
Glantz: Or '86, yeah.

08-02:02:59
Burnett: Eighty-six, I think. [That is correct.]

08-02:02:59
Glantz: I served on there for thirty-four years. I was the longest-serving member of any Cal EPA committee by a lot, I think. I asked people at the agency after I retired, "Anybody served longer?" They couldn't think of anybody. And so what would happen is the state would write reports, and they would come to this committee, and in order to move them forward to regulation the committee had to actually approve the report and issue what were called findings. And this is very different, again, from most scientific advisory committees. We weren't an advisory committee, or they're not an advisory committee; it's a review committee. And so the committee has quite a lot of power. If a state agency comes forward—or one of the two agencies we dealt with, which was the Air [Resources] Board and the pesticide department [Department of Pesticide Regulation]—with a report that we didn't like, we could make them change it, and just say, we're not going to approve this until you do what we want. And so it's a very powerful committee, and the quality of people on it was just consistently, unbelievably good, which was one of the reasons I stayed on it all those years.

08-02:04:24 And I remember the first chemical to come before us after I got appointed—The other thing is when I first got appointed, I was very frustrated that we didn't have anything to do with regulations; we were just talking about what's the evidence. But now that I'm all grown up I realize that that's actually good, because it really allowed us to focus on the science and to not get balled up in the regulatory implications. Our job was to come up with the most defendable [scientific] conclusions we could, and then they got handed to the regulators to then deal with [the politics].

08-02:05:05 And I remember when we dealt with diesel, and I was one of the lead people on diesel, we had a meeting with the chair and me, and maybe one other person—because we couldn't have more than three people or we would violate the Open Meetings Act—But we had a meeting with me and the chair and maybe one other member, and people from the Diesel Truckers and the Diesel [Manufacturers] Association and Western States Petroleum and all these guys over the—And they said, "If you guys list diesel as a toxic air contaminant, it will destroy the economy, it will ruin the industry, nobody will ever be able to

drive a truck again," blah, blah, blah, which, of course, ended up not being the fact, but never mind about that.

08-02:05:51 And I remember the chair, a guy named John Froines, who was a toxicologist from UCLA, who had also been one of the Chicago Seven, by the way, and he grew up and became a toxicologist, and Froines said to them, "That's not our problem. Our job is to get the science right, and then you should go argue with the regulators." And the fact that there was this wall between what we did and what the regulators did really, I think, greatly strengthened the process, because it got all of that political stuff kind of out of the way. And, in fact, with diesel, that went on for quite a long time, and there was a lot of meddling from Pete Wilson, who was the Republican Governor at the time, or attempted meddling, but when we finally got to where we were going to approve the final report, I remember we had a meeting. It was at some conference center down near the airport. And the Trucking Association said there was going to be a demonstration, that thousands of truckers were going to show up and surround the venue with their big rigs and make a big scene. And so the Air Board, which usually these meetings were—they were public meetings, but usually twenty people might show up, but they rented this big auditorium so they could accommodate all these truckers, and they had us meet at a restaurant away from the conference center, and then we got in California Highway Patrol cars, and they drove us to the meeting site, because they were afraid we might get attacked or something. And I remember Froines saying to me, "This is the first time I've ever been on this side of a police line." [laughs] The whole thing [demonstration] fizzled. There were like twenty people showed up at the meeting, and it wasn't surrounded by trucks. But diesels are cleaner in California because what we did, and there's still a problem but they're way less of a problem.

08-02:08:13 And I sort of jumped ahead, but being on that committee was an opportunity to bring science to important environmental questions, which I'm interested in, in a way that actually made a difference. And I got kind of ahead of myself, but the first chemical that came to the committee after I got appointed—and I was, I think, in the second round of appointments—was coke oven emissions. Coke ovens are how you make steel. And so the reports had two parts: there was the part on the health effects, and there was an exposure part. And there weren't any coke ovens in California at the time, so I said to the Agency, "Why are we wasting our time looking at coke oven emissions when there aren't any coke ovens in California?" It's like, well, there's lots of evidence about coke oven emissions, so we could write a report that we had a lot of confidence in the science on. And I was sort of like, "This is stupid, and a waste of our time."

08-02:09:25 And so the first substantive thing I did on the SRP was I said, we need to come up with a way to prioritize chemicals, and deal with the important ones first because we don't have the resources to deal with everything, and I never want to see another report on coke oven emissions until there's at least one

coke oven in California. And so that, we worked with the Agency, and somewhere along the way they created the Office of Environmental Health Hazard Assessment inside Cal EPA [Environmental Protection Agency], and to come up with a way, kind of a logical way, to prioritize things to look at based on not only how toxic they were but how broad the exposure was in California. And that was based on very incomplete information, because they hadn't yet done the report, but it was saying, okay, well, how can we do this in a way we're making good use of resources?

08-02:10:27 And so I actually think even though that was a kind of low-profile, down-in-the-weeds thing that I did, I think that was, to this day, one of the most important contributions I made on the committee. And every few years they would update, or do update, that list. And then later another law was passed dealing with giving special emphasis—I don't remember the number of the law—on toxic air contaminants that had a disproportionate effect on kids [The 1999 Children's Environmental Health Protection Act (Senate Bill 25), by Senator Martha Escutia]. And again, the first thing I said was we need to have a prioritization process to focus on the things that matter first. And as some other very high-profile chemicals that came before the committee, one of them was perchloroethylene, which is used in dry cleaning, or was used in dry cleaning—now it's banned—and we developed standards for—Or we didn't develop a standard; we said, yes, this meets the requirements of a toxic air contaminant. Here's the unit risk for it, and there's no threshold, and do something about it. [The regulatory agencies developed the actual standard based on the risk assessment we approved.]

08-02:11:42 Well, it all came around [to me personally] six months ago, because four blocks from here [my house] they want to redevelop a site to low-income housing, okay, which is wildly controversial with some of the neighbors. My wife and I think it's a great idea. Well, it turns out the site back in the fifties was a dry cleaner, so there's all this perchloroethylene in the ground. And part of the environmental assessment of this low-income housing project is what are you going to do about the perchloroethylene in the ground to keep it out of the air. So I all of a sudden got a dear neighbor letter from the Department of Toxic Substances Control, saying, "We just want you to know that a few blocks from your house there were actually two dry cleaners"—one on the other side of the street, too—"and there's this perchloroethylene in the ground, and here's the mitigation plan," blah, blah, blah, "and if you want to know more about it, get on this list." So thirty years ago, I worked on the project that ended up making sure that they're going to have a mitigation plan for this perchloroethylene four blocks from here. [laughter]

08-02:13:04 And we dealt with formaldehyde was another one, as you mentioned. And I kept saying, "What about secondhand smoke? If you look at the definition of TAC, toxic air contaminant, it meets it, and I think we should deal with it." And there was a lot of back and forth about it, and, oh, we're [the California Air Resources Board or CalEPA] going to get sued by the tobacco companies,

and it's going to make us all crazy. And finally we got them to do it, and so the state did a really excellent job, which they couldn't do any outdoor regulation, or couldn't do much, but in order to do the report they had to do outdoor assessments, and they went out in the area in front of the Sacramento Airport, and found very high levels of exposure out on the street where people would come out to smoke. They took measurements inside an unnamed large amusement park in Southern California and found very high levels. And that actually led to a lot of smoking restrictions being imposed outdoors [by localities].

08-02:14:24 But that was happening at the same time the diesel report was in the works. And, again, the Governor, he was really trying to hold that report back. Or, no, I'm sorry; I'm mixing that up with the lead report. [It was the diesel report. The governor also tried to meddle with the earlier lead report.] But I got a call from the Air Resources Board, and he said, "Look, the Agency doesn't have authority to regulate indoor air. The Agency has authority to study indoor air, and educate people about it, but we [the Air Resources Board] don't have any actual regulatory authority, and we do have regulatory authority outdoors, and the Governor's Office is threatening to hold up the diesel report if the Air Board lists secondhand smoke as a toxic air contaminant. And you're one of the leads on diesel, and do you really want to jeopardize the diesel report just so you can get this secondhand smoke report out when we actually can't do that much with it?" So I agreed to drop my pressure to take—

08-02:15:42 So what would happen is the Agency would do a report. It would come to us. We would talk about it. We would say, "We want you to do this, that, and the other thing." We'd go back and forth a couple times, and then the [SRP] Committee would approve the report and issue findings, and then it went to the Air Resources Board or the Department of Pesticide Regulation, and they would actually do the listing by accepting our recommendation. So the listing was actually a regulation. We didn't issue the regulation; the agency did. And so the agreement that we reached—and this shows you how science and politics sometimes collide—is that the agency would accept the report, and make it—well, it was already a public document, because it's a very public process—accept the report, and do public education about the report, but they wouldn't list it as a toxic air contaminant. But what I extracted from him [the director of the Air Resources Board] was an agreement that after diesel made it through the process and got listed they would go back and list secondhand smoke. [laughter]

08-02:16:53 So the [secondhand smoke] report got finished. The committee approved it, made findings, and it went up to the Air Board, and as one of the leads I was at the Air Board meeting. And one of the members of the Air Resources Board said, "Why aren't we listing this? Why is this just 'Here's an information item' and not as an action item?" And I sat there and kept my mouth shut. I was very proud of myself. [laughter] The real answer was, hey, a political deal got cut to spring diesel.

08-02:17:23 Well, anyway, what happened with diesel was it took a long time. The industry really, really fought hard. They put a lot of public comments in. There were many meetings about it. But finally, it made it through. I mean, the most embarrassing thing in the diesel report was there was this guy from Harvard—his last name began with a G; I can't remember his name [Eric Garshick]—he had done one of the definitive studies of cancer in railroad workers who worked around diesel. It was one of the best human studies. And a lot of the report, the risk number was based on his work. And he got hired by some diesel interests to come to the meeting and basically trash his own report. It was just really—I felt bad for the guy. They must have paid him a lot of money.

08-02:18:25 But one of my legal high points on the committee was after we heard all this and went back and forth, I finally said—Because it was the usual thing. It was a lot of nitpicking. He was nitpicking his own report. But finally I remembered the Air Board's lawyer was sitting behind me, and I said [to him], "Can I have a copy of the law?" So he hands me the law, and I said, "Okay, here's the definition of a toxic air contaminant in California: in the air; toxic meaning this. Is there anybody in this room who doesn't think diesel meets this definition?" And there was just dead silence, including that guy [Garschik]. And after I waited a little bit, I said—because they have a court reporter at these meetings—"Let the record show that nobody in this meeting thought diesel wasn't a toxic air contaminant." And the lawyers were like, "Ah, yay for you, yay for you."

08-02:19:28 And then it [diesel] went on and got listed, and California now has very strict, not perfect but very strict, regulations on diesel. It's still a problem, but it's much less of a problem. And all those predictions of economic chaos, and we would have no trucks in California ever again, none of that turned out to be true. And this took two or three years; it took a long time. So then when it's over I called up the ARB director and said, "Okay, a deal's a deal. I want to list secondhand smoke as a toxic [air contaminant]. I want the report taken to the Board as an action item." And so the Agency's lawyers came back and said, "Well, here's the problem: the law says that the report"—and I don't remember the exact words, but it was it has to be based on the best available current science, and the science isn't current anymore. So I said, "Okay, have the Agency update the report and then we'll vote on that." So everybody agreed to that. Well, I thought it was going to be like ten pages, and it ended up this much stuff, because the science had really moved forward quite a lot, and they added breast cancer to the effects of [secondhand smoke and] smoking. They were the first government agency in the world to add breast cancer, and some cardiovascular effects, other things. And to this day, that is a seminal document. And to this day, the CDC [US Centers for Disease Control and Prevention] still hasn't admitted that secondhand smoke causes—Well, they've admitted it, but they haven't put it in their formal recommendations.

08-02:21:26 So that's why there were two reports. And another report I played a really important role on was lead, which, again, the lead industry has a very storied history of blocking science and poisoning, especially, kids with neurological problems. And I was one of the leads on that. When I talk about a lead, what happened is the committee decided at some point that rather than having everybody get the report cold, that two or three members of the committee would be appointed as leads to work with the Agency and try to knock as many rough edges off the report before it went to the full committee, and they [the SRP chair] would pick people who knew something. Usually it was one life science guy and one person who was an exposure person, or maybe an atmospheric chemist, and sometimes a third person.

08-02:22:29 So the lead report came to the Committee after a couple of times, and I remember what the committee had to vote was that the report wasn't "seriously deficient." [laughs] We didn't vote that it was good; it was not seriously deficient. That was the language in the law [AB 1807]. And finally the lead report came to the Committee—big, thick report—and there were about ten pages in it dealing with one issue where the Committee wasn't happy. And we sent it back to the Agency and said, "Everything else is okay. Fix this." And another good thing in the law is it's really designed to prevent stuff from just being thrown in the trash. So the Governor has control over when—or the administration—the process starts, but once the report comes to the Committee, at least in theory, it's supposed to come back with any corrections in three months. Now, often they don't meet that, because it usually takes them longer, but the lead report just sort of vanished. And to the point that the Committee—I think it was lead—actually had a meeting with no agenda to say, "Where the hell is the lead report?"—I think it was lead; we did it over something—to put pressure on the administration to get a report back.

08-02:24:00 And so, finally, the lead report came back. Now, mind you, it was a big, thick report, and there was one small section they needed to fix, and the whole report had been rewritten and watered down, which was just outrageous, and it was just politics. And so what I did is I went to the Agency and said, "Can I have a track changes version of the report that shows everything that was changed?" And so normally when the Committee would act on a report, the motion would be we vote to accept this report, subject to these general changes, and delegate to the chair of the Committee to accept on behalf of the Committee; or if the chair wanted the whole Committee to look at it again, we could look at it again. With the lead report, I went through and said, "I move this report be accepted, with the following specific changes." And the motion was an hour or two or three long. I went through and read, "On page six, line four, change 'is' to 'was,' or 'may' to 'does,'" and just every single one of these changes. And everybody knew that was going to happen so nobody got mad. And then the Committee voted to accept the report, subject to those specific changes, and we basically put it back to the way it had been, except for the one section that they'd fixed, which we then accepted.

08-02:25:40 And I was involved in some others. And then the last big one—in fact, as I said, it was a three-year term and I just kept getting reappointed, and finally—it was probably, by now, six years ago—it was right after Trump got elected my term ran out. The terms run January to December. And I called up the people at Cal EPA and said, "I'm moving toward retirement. I've been on this committee for thirty years, or thirty-one years, and I think that's enough, and I'm going to step down." And they're like, [laughs] "You can't do that. Did you see who just got elected president?" And they had the deputy head of Cal EPA, the chief scientist, call me up, a woman, Gina Solomon at the time, who's a good person, and they just said, "You've got to do this. We need you. We have, among other things, chlorpyrifos in the process," which is a very important pesticide, and some other things about changing the protocols for risk assessment, which was another whole area I did a lot of work on. It wasn't specific compounds; it was like, what are the rules for assessing the compounds? Which gets to stuff you're interested—How do you make a decision in the face of a lot of uncertainty sometimes? And I work with them to develop a whole set of guidelines for different aspects of risk assessment, which, again, this is stuff that's kind of below the radar, but that was more important than any of the specific chemicals I worked on.

08-02:27:29 But anyway, okay, finally I gave in and I agreed to be appointed again, but I said, "This is the last time." Because remember, by then I knew I had chronic lymphocytic leukemia, too. I didn't tell anybody, but it's like, it's time to move on. But we got into chlorpyrifos, which is a neurotoxin, and Obama was moving toward banning it, and then Trump came in and unbanned it. And it came to the Committee here in California—and there are a lot of problems with Department of Pesticide Regulation, although it's better than it used to be, but they came to the committee with this report on chlorpyrifos, and basically came up with a risk number, and like most of what had been done before it was based on very well-documented effects it has on red blood cells. And they came up with a risk number based on the effects of chlorpyrifos on red blood cells. But there was newer data, not nearly as well developed, much more uncertainty, but no question that it was a neurotoxin for pregnant women and babies, and at much lower levels than what was causing the red blood cell effects.

08-02:29:05 And we said, "Well, you need to redo the whole risk analysis using the neurotoxic effects on kids or babies. And the red blood cells stuff, there's nothing wrong with what you did, but we should be using the most sensitive endpoint." And the Department's initial reaction was, "Well, you're an advisory committee, and thank you for your advice; we're not doing it." And I said to them, and a couple of other members said, "No, we have to approve this report, and we're not going to approve it until you do this." And the Department [of Pesticide Regulation], which at one point when I was being reappointed when David Roberti was the president pro tem of the Senate, and they wrote me and said, "Do you want to be reappointed?" I wrote back and said, "Yes." I said, "By the way, the Department of Pesticide Regulation

[DPR] is paying no attention to this law, and you ought to just amend the law to delete them so nobody's pretending we're dealing with pesticides," which, of course, caused many waves.

08-02:30:09 But later, DPR under Newsom is different now. They're not stark raving environmentalists, but they behaved in ways that I'd never seen before, add when the Committee said, "This is what we want," they went out and did it, and they did it well. And it was a huge amount of work for them to accommodate the demands we were making but they did it, and they did it well. And I remember them saying in one of the hearings, because we had several meetings about this, "If we set the permissible exposure level as low as the data justifies, they're going to have to ban this chemical." And I remember saying, "That's not our problem. Our problem is to get the numbers right the best we can, given the uncertainties, and then it's up to the regulators. If they want to expose people to this now scientifically-blessed risk, that's their business." And that led to the chemical being prohibited in California.

08-02:31:19 And it was a huge amount of work. I got a lot of the kind of original studies, and there was a pile about this high [two or three feet] sitting on the floor over there, and plowed through all that stuff. But it was worth it. It made a huge difference. And it really put California way out in front of the federal government. And I thought that was a nice sort of last big thing on the committee. But I think there's no question that this is a safer place to live because of the work of that committee. The people on it are all great. On all the thirty-four years I was on it, there was never somebody appointed to that committee who was an idiot. [laughter] And I always learned a lot, because there was this tremendous variety of expertise. I think the people in the agencies are fantastic scientists. I always learned a lot. And it made a big difference, I think. It's like the secondhand smoke work and the e-cigarette stuff: there are people who have better lives today than they would have had I not—and I don't want to sound like an egomaniac, but I think the work that I've done over my career has made life a lot better for a lot of people. And it's a good feeling.

08-02:33:00 And people say, "How can you put up with all the shit you have to put up with, and all these bad guys chasing you, and this and that?" But I think that it kind of comes with the territory. I mean, there were efforts by industry to get me thrown off that committee many times. Well, and plus Froines and Paul Blanc, who's another professor at UCSF who's on the Committee, who would have been in the Chicago Seven except he had the flu that day, and it's just good.

08-02:33:34
Burnett: What's the nature of trying to get you off the panel What does that involve?

08-02:33:37
Glantz: Well, what happened—I mean, this committee, it's a very strong committee, and very independent-minded, and works to very high standards. And we'd done diesel. We'd done dioxins. We'd done lead. We'd done a couple of pesticides, and secondhand smoke. And industry didn't like it. And so what happened, the strategy that they used to try to get us, me and several people, off, was our appointments were for three years, and under state law if you're appointed to a committee and your term runs out, you can continue to serve until you're replaced. And so what ended up happening is if the appointing authorities were happy with the people on the committee, which they generally were, they just said, okay, and they didn't bother going through the whole rigamarole to have the [president of the] University of California nominate three people and go through the whole selection process. And so some companies sued the state, saying that the whole Committee was illegal, because if not everybody almost everybody hadn't gone through this three-year reappointment thing.

08-02:35:13
And so in the end what the Attorney General said was, "Look, we could go fight this, but why don't you just go through the process and properly reappoint people and then the case will be mooted out?" So that's what happened. And I don't know anything about the details of this, but there were several members that they replaced, and I wasn't one of them. Blanc and Froines and I, who everybody thought were the main guys they were after, got reappointed.

08-02:35:46
Burnett: Well, taking ego out of it, give me a sense of what kind of—

08-02:35:55
Glantz: And, by the way, these reports, I didn't do any of that myself. There were other people on the Committee. But there were these great civil servants who drafted the reports, and who, with varying levels of enthusiasm, dealt with all of our criticisms over the years. [laughter]

08-02:36:15
Burnett: Well, let's say without appealing to principles of science, or ideas of the proper role of the scientist, what kind of social role do you play, and people like you? Just leave it to say people like you, who do scientific research that is controversial, that attracts an amount of scrutiny from powerful interests, who attack you personally, make your life more difficult than it would otherwise be just doing cardiology research at a nice university with a nice salary. What kind of person is that?

08-02:37:13
Glantz: Oh, it's a good question. I mean, I think it's somebody who likes science, who has a kind of idealistic view of the truth and universities, and who wants to see the work go beyond just the narrow puzzle-solving you do in science. And there's a long tradition in science of trying to take the work you do and take it

out into the real world. I'm not, by any means, the first person who's ever wanted to do that, and it's just in that tradition. One of the stories in—how do you pr—? Kevles? Is that how you—?

08-02:38:00
Burnett: Kevles, Dan Kevles.

08-02:38:01
Glantz: Kevles' book, [*The Physicists: History of a Scientific Community*, 1979] one of the stories I thought was pretty fun was during World War II some people at MIT invented sonar, and the Navy didn't want to hear about it. "This is all stupid, and blah, blah, blah." So they [the MIT scientists] rented a boat, and went out and found an American submarine, and got arrested. Espionage. It's like, "No, we're just trying to show to you guys that this works." [laughter] So I think it's people who want to take what they've done and put it to some use.

08-02:38:41
Burnett: And influence others?

08-02:38:44
Glantz: Pardon me?

08-02:38:46
Burnett: And influence others? So is there a leadership element to it?

08-02:38:50
Glantz: Well, I think that's true in almost—I mean, everybody I know who is a scientist is hoping to influence other people, have other people believe what they come up with. Maybe there are people who are just in it for the puzzle solving, and would be happy sitting in a cave somewhere. Maybe it's a self-selection of the people I've hung out with, and the fact that I'm in a medical school, which is practical; you're trying to make patients better. But I don't know anybody who wouldn't be happy to see whatever it is they figured out be put to some practical use. People have varying levels of interest in that, and commitment to spending their time making it happen, and aptitude to do that. But I've never met anybody who said, "Gee, I discovered X, and somebody used it to do something good. I'm really unhappy." [laughter] You know?

08-02:40:08 As we talked about way back in the beginning, I started out in engineering, which is designed to do practical things. So maybe I have kind of maybe more of a bent of that than some. But if you look at physicians who do medical research, they're mostly driven by having—even if they're not seeing patients anymore, they remember them. There was just a thing in the paper today that Merck has a malaria vaccine now. Well, people spent years running up against wall—The mosquitoes, as we talked about, don't have lobbyists and lawyers, [laughter] so the mosquitoes aren't fighting them, but there had to have been fifty million frustrations in getting to where things are, and I'm sure the people who did it are feeling good about it.

08-02:41:10
Burnett: So there's a moral purpose that is beyond just the puzzle solving, that there is some impact on the world that you're looking for, and hoping for—

08-02:41:24
Glantz: Yeah.

08-02:41:24
Burnett: —that compensates for the conflicts and the pressure and the—

08-02:41:31
Glantz: Oh, yeah, yeah. But for me, personally, given that I'm doing work where the things I've learned have hurt powerful interests, you have to be willing to accept that and deal with the fact that they're going to try to get you. It's unfortunate, but if you want to do things that are going to hurt these rich, powerful corporate interests, they're not going to like it, and they're going to do what they can do to stop you. If I was them, I would do it, too. A couple days ago a woman from Facebook [Frances Haugen], I watched, she testified for three and a half hours in front of Congress. Because I'm retired I had the time to watch it, and I was really impressed with her. I don't know what kind of backstop she has, or protection from the forces that have come down and will come down on her, but she did the right thing. And in speaking, she's very smart, she's very well prepared, and when they asked her questions she didn't know the answer to, she said, "I don't know the answer to that," rather than bullshitting her way through it, and I think did the world a great service. And I'm sure that her life is going to be made difficult, and probably has been made difficult, but I think she should feel very good about what she's doing, and the processes that she's starting.

08-02:43:22 I mean, the other thing, as I look back over my career, that I am proudest of, actually, isn't any specific thing I did; it's the people I trained, and the model [of how to be a successful academic working on important questions that impact people's lives], and getting people moving along making their contributions in ways that I never would have thought of, and probably wouldn't have been able to do myself. And I think that's the most important thing. And when you talk to a lot of professors who are the best people, they talk about that, and they take a lot of pride in the kind of people they've helped kind of move along. There's still one [postdoctoral] fellow I'm actively working with, and she just got offered two jobs today. Well, one she got offered last week, but they've just sweetened the pie, and she's now got a second one. And it's like [she's now asking], "Oh my God, what am I going to do?" And this is a person who is too self-critical. Nobody's perfect, and she's not perfect, but I think she's really underestimated her own skills and talents. And I said to her, "Well, are you surprised that you now have two different organizations, and there'll probably be a third one, fighting over you, and that they're now competing to get you?" And none of these jobs are perfect. They have different strengths. It's not totally obvious which one is the best, actually, although it's one of these things where she could roll a pair of dice to pick it

and would be fine. But I feel really good about that, and that I've been one of the people who has helped her get to this place. And I think that's worth a lot.

08-02:45:41 It's another side of the work, the research we've done, and the work I did on the SRP, and then other committees I've been involved in, in a more transient way, that because I did what I did, things are better for a lot of people. And people have been empowered to do things, and move in directions that I never would have thought of. And I think people take a lot of satisfaction from that. I mean, that's why the good people I know have become professors. Everybody I know who's in academia could go do something else and make lots more money. But even with all the crap I had to deal with in the last couple, three years of my career at UC, which I'm still very unhappy about, but netting it out, if you look at me versus some friends of mine, who made tons more [money]—I can't complain; I made plenty of money, at least by my standards—but people who made a lot more money than I did, I think in the end I'm mellower than they are. I didn't feel the need to go get a Lamborghini with all the money I had. We have plenty. And some things you succeed at, some things you fail, but net out, I think the world's a better place because of work I've been able to do, and that makes me happy.

08-02:47:27
Burnett: Dr. Glantz, thanks for taking the time to talk with us.

08-02:47:30
Glantz: Okay. Well, thank you for being interested.

Interview 9: June 6, 2022

09-00:00:13

Burnett: This is Paul Burnett, interviewing Stan Glantz for the UCSF University History, and this is our ninth session. It is after our last session, and thematically this will be placed between sessions six and seven [It was, in the end, placed here at the end of the transcript]. Welcome back, Stan. It's good to see you again. One of the themes of your career has to do, in general, with fairness. I think you're interested in giving people an equal shot at health, without undue influence, without a finger on the scales, and one of the things that you encountered early on was that scientists, as workers, did not necessarily have an equal shot at things, not necessarily have an equal seat at the table. And I think you learned early on, you had some mentorship by some key figures who told you about how the system worked at UC San Francisco, or in the scientific and health communities. Julius Comroe is one of the people that you mentioned in an earlier session.

And so you became, later on, a kind of advocate for students, postdocs, and faculty of different ranks, to help them understand their place in the system, and how they might change their place in the system, how the system itself might be modified to be made more equitable. So I'm wondering if you could catch us up a little bit on some of the issues surrounding the treatment of faculty. It has to do with adjunct faculty. It has to do with clinical faculty, as opposed to the sort of standing faculty appointments at UCSF. Can you tell me a little bit about—first of all, to back up—the importance of shared governance in the UC system, what it means to have Senate rank, and a little bit about how being a professor is not just a blanket thing? There are ladders; there are different categories of professors. Can you parse that out a little bit for us, before going into the details of the historical sequence of events?

09-00:03:18

Glantz: Sure. Well, to take your last question first, about different kinds of professors—and this was one of, probably, the single most useful thing I learned from Julius Comroe, actually, is that there are different kinds of professors. There's what are called ladder rank, or FTE [full time equivalent] professors, which is what most people think of when they say "professor." This is somebody employed by the University, paid by the University. If you make it to associate rank you have tenure. You're a member of the permanent staff. You have teaching responsibilities, you have service responsibilities, in addition to research, and you're a full member of the academic community.

09-00:04:03

Now, the universities over time evolved other tracks, other series for professors, for legitimate reasons, actually, and the two that are most important here are clinical and adjunct series. And if you go back historically and look at where did these come from, if you go back before the fifties, when medical schools got kind of professionalized, most teaching hospitals had relatively few people that they were paying, and most of the teaching was

done by clinicians who were granted hospital privileges. The deal was we'll let you practice in our hospital in exchange for you teaching our students and residents. And so the clinical faculty, for the most part, were not even paid by the University, or paid a very nominal amount. And what happened over time, as the medical schools became professionalized, they started hiring full-time faculty, full-time employees. And if these people's primary responsibility was taking care of patients, they were just hired as full-time clinical faculty. So the situation kind of morphed. Because, again, if you go back to the beginning, clinical faculty often weren't even being paid by the University, so they weren't members of the Academic Senate, and it's Senate membership which confers the right and responsibility to participate in shared governance of the University through committees and other processes, to determine the curriculum, which the regents have delegated to the Academic Senate, admitting students, granting degrees—there's a whole range—offering courses. At the University of California, at least technically, you can't teach a course if you're not a member of the Academic Senate, although you could get special permission to do it.

09-00:06:26

And so you ended up with this class of clinical faculty who had become increasingly central to the functioning of the School of Medicine, and the other schools to a lesser extent, and who were doing a lot of the teaching, but who didn't have any formal status in the Academic Senate, which is the organization that's supposed to be overseeing teaching. Now, one response to that was to create what they called the Clinical X series, or Professor of Clinical Medicine, as opposed to Clinical Professor of Medicine, and this was somebody who was primarily a clinician but they actually had Senate membership, so their teaching role was legitimized in terms of the University. But most of the faculty who were clinical were in the old kind of clinical appointment.

09-00:07:23

The other category of faculty that grew up are the adjunct faculty, and the adjunct positions were originally developed when there was somebody from outside the University who had some special expertise that you wanted to bring in and have them teach a course or something. A very, very good friend of mine was a lawyer who became a major expert in what's called insurance bad faith litigation. That's when you buy an insurance policy, and you have a loss, and the insurance company doesn't want to pay it, and you go into court over whether they pay it or not. And he became very expert in that. And so he was asked to be an adjunct faculty member in the Law School at Berkeley to teach a course on insurance bad faith, which he did. He did it because he liked doing it. He liked working with the students. He got the access to the library, and he got a little bit of money, but it was really an adjunct position in the sense of not a permanent, long-term part of the University. And what happened over time is, kind of like the clinical faculty, a lot of faculty who are primarily doing research, mostly PhDs but also some MDs and dentists, were

getting hired as full-time adjunct faculty. So, like the clinical faculty, they didn't have Senate membership; they didn't really have any standing in the University as an institution; they didn't have any formal voice. And this was a growing group of people.

09-00:09:10

Now, from the administration's point of view, this was great, because if you're a mainline, ladder-rank faculty member with an FTE, or in-residence faculty member, [in] which you don't have state funding but you have essentially the same status, and they want to get rid of you, there's a whole lot of due process and rigamarole that you have to go through, and the institution has some financial obligation to the Senate faculty [including in-residence faculty], the traditional Senate faculty. For the clinical and adjunct faculty, who, again, originally were just sort of add-ons to the University, they have virtually no security, either. I don't know what the exact detail of the role is now, but when I was paying a lot of attention to this you could let somebody go with six weeks' notice, just by saying, "We don't need you anymore." And so it's a very unstable situation. And, in fact, this has become a huge problem for higher education generally, because what's happened, as universities have had their budgets cut, they have moved to hiring a lot more adjunct faculty, who are cheaper, often who don't get benefits, who are really, really getting screwed, and they're called the contingent faculty. And this is a huge problem everywhere, but, again, at a place like UCSF it was manifest a bit differently, because the clinical and adjunct faculty—they still have actually what traditionally would have been called clinical and adjunct faculty, appropriately, but they had built up this large contingent of full-time employees of the University, full-time long-term employees. They were by and large getting paid like everybody else, so it wasn't the kind of raw deal that you often get at places like San Francisco State, but still they had no standing, and they had no voice. And it was very common for departments to recruit junior faculty into these positions, because they weren't really making any kind of long-term commitment to them. So if you're the department head, it's great when you can get somebody into one of these positions with absolutely no security, with no meaningful commitment by the department in hiring them. And so that's what I learned [from Comroe] to avoid personally, and what I then counseled my students and fellows after that you want to avoid.

09-00:12:12

But the way that I got involved in this issue at an institutional level, as opposed to in my I'm teaching people what Comroe taught me level, at an individual level, was around 2000 or 2001, Larry Pitts, who then was the head of the Academic Senate, San Francisco division, wanted to do something about getting the clinical and adjunct faculty into the Senate, so they had a formal role in shared governance, which they didn't have at that point. If you look at the committees that the faculty have, which participate in running the institution—and they do, to a greater or lesser extent, but they do have an

impact—those people just simply couldn't even be members. And so Pitts started agitating to get them into the Academic Senate, not the people who were incidental but the full-time employees. And I think at the time I may have been the chair of the UCSF Budget Committee, so I was a part of the Senate leadership in the campus at that time, and when he started raising this as an issue I piped in and I said, "Well, look, I understand where you're coming from, but I think a lot of the faculty who are in these clinical and adjunct positions shouldn't be in them. They should have Senate-rank positions, either in residence or a professor of clinical X. And so, really, rather than trying to get the Senate to take these so-called peripheral people and bring them into the Senate, as if they were regular faculty, we should just go get all the people who really should be holding regular faculty appointments and get that fixed, and then, after you fix that, look at who's left and see, is this still a problem we need to deal with or not." And there was a lot of pushback from the administration about that, because, again, it's financially advantageous to the departments to avoid having to make these commitments. And so after a certain amount of politicking and discussion, the way this morphed was to say, well, let's look at clinical faculty, in terms of how is UC as an employment faculty for the clinical faculty, and that led to the first of several committees that engaged this issue, and I sat on all of them.

[Here are the relevant committee reports:

2001: Task Force on Clinician Scientists at UCSF The Future of Clinician Scientists Task Force Initial Report and Recommendations February, 2001 (https://senate.ucsf.edu/2001-2002/clinicianscientistreport.html)

2002–2004: Task Force on Faculty Recruitment, Retention and Promotion Report (Attachment 1 to https://senate.ucsf.edu/2009-2010/v2-frrp-02-17-10-armitagereport.pdf)

2009–2010: Task Force Reviewing the Recommendations of the Task Force on Faculty Recruitment, Retention and Promotion and New Faculty Appointments (https://senate.ucsf.edu/2009-2010/v2-frrp-02-17-10-armitagereport.pdf)]

09-00:15:16
Burnett: And that was the Senate Task Force on Faculty Recruitment, Retention, and Promotion?

09-00:15:21
Glantz: Yes.

09-00:15:21
Burnett: Okay. Also known as the Armitage Report?

09-00:15:25
Glantz: Yeah, because the chair was a professor named Gary Armitage, who did a great job.

09-00:15:32
Burnett: So that's 2000, and that sort of anchors us in history a little bit.

09-00:15:39
Glantz: Right.

09-00:15:39
Burnett: And you're absolutely right: there is this concern around adjunct faculty in the United States and in other countries, this casualization of academic labor.

09-00:15:50
Glantz: Right.

09-00:15:50
Burnett: In the case of UCSF, these are clinical faculty, so these are presumably MDs, DDS folks, and there is a competitive market for their labor. So you're saying it's not so much pay. They're being paid all right, right? But it's a question of benefits, security, and decision-making power—

09-00:16:19
Glantz: Right.

09-00:16:19
Burnett: —that is associated with the running of the institution. So you have an environment in which people who are responsible for teaching have no say in what it's—I don't want to put words in your mouth.

09-00:16:32
Glantz: Well, yeah. See, to teach, theoretically, you have to be a member of the Academic Senate. Now, exceptions can be granted, on a case-by-case basis, but the general rule is—one of the main things the Senate exists to do is to supervise teaching, and so to teach a course you are supposed to be a member of the Academic Senate. And so you had a situation where a lot of the teaching was being done by people who weren't in the Senate, and to get around that what was done—and this was not just at UCSF—they would get some Senate person to be the instructor of record, even though somebody else was doing all the work, which was also not fair. And, as I said, for the clinical teaching, a little bit before, not a long time, but a bit before the stuff we're talking about now that happened in the early 2000s, the University had created this professor of clinical X, which was an Academic Senate rank for clinicians who were primarily doing clinical teaching, and that regularized their role in running a lot of the clinical teaching. And that appointment was a little bit different than an FTE or an in-residence appointment, in that it had less of a research component, because there was a recognition that if somebody's mostly taking care of patients and teaching, they don't have time to go run a big research program. So those people had to do some research, but it could be

research on education, for example. But even so, you still had this other huge group of people who had non-Senate clinical appointments and adjunct appointments, and who were, as far as I could tell—not all of them—we actually studied this in these committees, and did surveys and interviews, and it turned out if you looked at the Academic Procedures Manual standards for the different categories of faculty, about half of the people in clinical and adjunct appointments, if you looked at what they were actually doing, they met the standards for a Senate appointment. And so the big, radical recommendation that we came up with was that the University should just follow the Academic Procedures Manual. So in looking at someone's actual work, if the actual work they were doing, in terms of teaching, research, university, and public service, met the standard of the APM, then they should be given an appropriate Senate title.

09-00:19:31

And through this series of committees, the Armitage Committee identified the problem and said a lot of faculty didn't understand these things. They weren't getting appropriately mentored. The departments were taking advantage of the situation, and that needed to be fixed. And then we had a follow-on committee a while later, which I actually agitated to get, because the campus administration, after a little bit of discussion, essentially accepted the Armitage recommendations and acted on a lot of them—in fact, on all of them, to a greater or lesser extent. And then I came back a couple of years later and said, "Well, we need to do a follow-up committee to see what happened. I mean, did this work?" Which is, I think, a very important part of shared governance, because the faculty makes recommendations to the administration; the faculty isn't the administration. But I think when you make recommendations, one way to exercise power is to say, "Okay, you accepted these recommendations; let's go back and see if you actually followed through on that," as a way of keeping the heat on. And what we found was that the recommendations had been introduced or implemented reasonably well initially. One of the things I wanted—well, let me back up.

09-00:21:08

One of the ways that they screw these assistant professors they bring in as adjunct and clinical faculty is they say, "We're just getting you on the faculty with training wheels. You don't have to meet all the responsibilities of a Senate-rank faculty member. And then, if you do okay, when you come up for associate rank, then we could change your series." And these junior faculty think, oh, that sounds good to me, but the reality is, from the bureaucracy's point of view, you don't just say, "Oh, Stan has an appointment; we're going to move him from this series to that series." You actually have to create a new position, and then Stan gets to compete for that position, because it's all got to be opened up in a national search and the whole rigamarole. And so they would say to these junior faculty as they were coming up for associate rank, and saying, "Well, hey, what about moving me into a Senate position?" They'd say, "Oh, oh, yeah, we could do that, but that's actually a new position,

and so we'll, of course, have to do a national search, and there's always a chance you're not going to get picked. So do you really want us to do that, or should we just leave you where you are?"

09-00:22:35

And so one of the things we recommended in I think it was the Armitage report, or maybe the one after that, was that when people are hired there needed to be a review by the administration and the Committee on Academic Personnel, which is a Senate committee, of the appointment letter, where somebody had to look at what was the actual responsibilities that this person was hired into doing, and was the appointment appropriate for somebody who was taking on those responsibilities. Because, as I said, we found about half or so of the clinical and adjunct faculty should have been in Senate positions, but that also means that about half of them were appropriately classified, if you looked at what they actually did. For example, I had a fellow who worked with me who ended up getting offered an adjunct faculty position at UCSF, and she came to me and said, "Well, how do I fight this and turn it into at least an in-residence appointment?" I said, "Well, what's your job?" And it turned out that her job involved no teaching, and no service. It was a full-time research position. And that actually is what adjunct appointments are for. I said, "Well, you could either go back and arrange some teaching, or you could just say, 'This is the right thing for me.'" And, on reflection, the person really didn't want to teach. So I said, "Well, fine. Then it's appropriate to be in that position."

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But what we found, what I wanted was for there just to be a wholesale review of all the clinical and adjunct faculty, to look at what's everybody doing, and then just bulk change their series without having to create new positions and do a full search and all the affirmative action stuff and everything. Now, that was too big a pill for the administration to swallow, but the compromise, which I think worked out fine, was that most people at that rank come up for promotions every three years, and so the agreement was that as people came up for promotions, in addition to reviewing whether or not they warranted a promotion, there would also be a review as to whether or not they deserved a change in series, and the administration would waive this requiring that a new—I mean, a new position was technically created, but they waived the requirement for a search.

09-00:25:33

Burnett: A search, which is the key, yes.

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Glantz: And so there was a huge shift, and I think in terms of the institutional role that I played at UCSF, that was one of the biggest accomplishments. I didn't do it all by myself, but that was a huge accomplishment. Now, we went back again a couple of years later and looked at it again—again, I said we really needed to do this—and we found a little bit of backsliding in this process, and I can

tell you from having talked to one of the Tobacco Center fellows who I've continued to work with a little bit, who just got a faculty appointment that got pushed into an adjunct appointment, which may or may not have been appropriate. So it's an ongoing problem, but I think there was a tremendous amount of movement.

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And then the other things about improved mentoring, and having better facilities to help junior faculty get their research programs going if they wanted, including administrative support for writing grants and things like that, and having a formalized system where more senior faculty could help junior faculty by just looking at their grants and giving them feedback. All that happened, and I think it's made a big difference in terms of people being more successful. I think that the institution is more invested in the junior faculty than I think they used to be.

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Burnett: There did seem to be some, in these reports, analysis and investigation of the criteria for excellence, right?

09-00:27:35

Glantz: Right.

09-00:27:35

Burnett: So what was the system of rewards, and is that appropriate? And so one of the examples I can think of was around different types of research, collaborative research versus individual.

09-00:27:47

Glantz: Right. Right.

09-00:27:49

Burnett: Could you just talk a little bit about that and why that was significant?

09-00:27:53

Glantz: Yeah, that was important for several reasons, and this is still a problem in a lot of fields and a lot of universities. I think UCSF, for the entire time I was there, going back to when I was a fellow, is a much more collaborative environment than you find in a lot of other universities, and there's a lot of emphasis put on working with other people, and working across boundaries. We talked about that stuff. But there was still a pretty strong bias in the promotion process, using the old model, where you have to do it all by yourself, and are you the principal investigator on the grant, not are you a collaborating investigator on the grant. Are you the senior person on all of your papers, or are you writing papers with other people? Which in some areas is viewed as a weakness. In [Departments of] History, to this day, I know History faculty who help graduate students—they don't have too many postdocs in History—write papers and then don't put their name on it, because if they did it would destroy their [student's] career. I had a couple historians who worked with me as

postdocs, and the normal model is you co-author the paper and put their name first, and they said, "Oh, if I do that, it'll destroy my career." And I thought, oh, please, but I talked to a couple friends of mine who were historians and they said, yeah, that's the way the field is. So it's a real problem, despite the fact—I met some woman from NIH, who was a researcher there, who'd actually studied this, and the NIH has found that people who tend to be collaborative are actually more productive, in terms of the number of papers they produce and then the impact of those papers. So it's objectively a good thing.

09-00:30:07

And so this is an area that got a lot of lip service at UCSF, and some support at an administrative level, but it was still a problem in terms of getting people promoted. And so one of the recommendations we had was that that needs to be more formally taken into the review process. And there was a lot of progress on those issues. And the interesting thing that came up, because this was also one of the excuses that some people had in the administration for not doing the shifts that we were talking about, about moving people into Senate-rank appointments, and they said, "Oh, these clinical and adjunct faculty, they're participants in research; they're not leaders." And so I actually pulled a random sample of publications by clinical and adjunct faculty on one hand and Senate-ranked faculty on the other, and looked at the pattern of authorship, and it was no different among the people who had active research careers. That's not quite true. For the kind of people that we were advocating for a change at series to get them into the Senate there wasn't any difference. There were some people who were clearly playing a supporting role, and there are collaborations. As somebody who was a leader in this, there were papers I collaborated where I was the senior person; there were places that somebody else was. But if you look at the overall publication record, the pattern you could see in the authorship was, well, Stan Glantz has a research thrust, or thrust that he's pushing forward, and along the way he's helping other people. He's working with other people. He's bringing other people into his work in a way that enriches it, and he's not just one of the crowd on fifty-five papers.

09-00:32:31

Burnett: Right, right. What I'm hearing—

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Glantz: And you could tell that, actually. It's fairly evident when you look at people's CVs, actually.

09-00:32:41

Burnett: What I'm hearing is that there was a lot of success with respect to getting the University to recognize that the way that people had been sorted according to these categories was not working, and so, in fact, if you show that they walked like a duck and talked like a duck, then you could move them into the duck category, and that was kind of an easier success in this. And you and your colleagues got a lot of people moved, right?

09-00:33:24

Glantz: Yeah, it was several. I think what I heard was like 400 people. It was a lot of people, and it was a good thing. The main resistance, the resistance didn't so much come from the upper administration; it came from the departments, which is who was on the hook for the money, and some of the financial people, who just didn't want to take the risk of making bigger commitments to these people. And we kept saying, look, they're doing okay, and the University is—this is an argument I made personally [when I was negotiating my original appointment to the faculty] all those years earlier—benefitting from them being here, and the University ought to have a little bit of skin in the game, and the risk needs to be shared between the individual and the institution. And, in fact [during the Armitage committee deliberations], I remember a conversation I had with one dean who really didn't want to do this, because they were just afraid that if they moved some of the adjunct faculty in the school into residence appointments, and then they had a funding problem, or somebody's grant didn't come through, which happens, that the school would be on the hook for it. And I said to her, "Look, if this person was a contributing member of the school, and had been doing good work, and was continuing to do good work as an active member of the faculty, and had hit a funding lapse in terms of grants, wouldn't the school cover them? Because you want to keep a valued person." "Oh, yeah, sure. Yeah, of course we would do that." It's like, well, then what's the problem? And it's like, "oh, I never thought about it like that."

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And the thing is if they're not willing to, if the person isn't central enough to the mission, well, maybe you shouldn't have hired somebody to do that anyway. The University doesn't have infinite resources, and just because somebody can write a grant and bring money in and pay the University some overhead, I don't think that's a reason to hire somebody. I think people need to be hired for programmatic reasons.

09-00:35:53

Burnett: Right. Well, there were several updates [to the original Armitage report; see list above], and you mentioned kind of keeping the heat, sort of this trust but verify approach to bureaucratic progression, I suppose. So there was another task force report that the review period was 2002 to 2004, so that was the early one, and they noted some backsliding that you mentioned, although there were these reclassifications. I'm not sure when those 400 got moved, when that happened. Did that happen immediately, or did that happen over time?

09-00:36:39

Glantz: It happened over a three-year period.

09-00:36:41

Burnett: Okay. So by the 2004 report, according to the logic of this reform, there was a representation of the adjuncts in clinical faculty in the Senate.

09-00:37:02
Glantz: Well, so that was a separate issue.

09-00:37:04
Burnett: That was a separate issue. Well, tell me about that.

09-00:37:05
Glantz: So what happened, so, as I said, I said, "Hey, if these are people who should be in the Senate anyway; get them into the Senate, then the representation problem goes away." But Larry continued making the argument—

09-00:37:23
Burnett: This is Larry Pitts.

09-00:37:24
Glantz: —Larry Pitts—and his successors picked this up after his term as Chair of the San Francisco Division ended—there are these other people who are full-time faculty, and they may not be members of the Senate, so certain academic responsibilities, like running courses or supervising students, which are the two main things, they're not doing that, but they're still members of our faculty. They're full-time employees. They're contributing to the University in terms of research and clinical work. And they need to be represented in shared governance, too. And so we think that even if they're appropriately categorized as—now, again, we're only talking about full-time people here—full-time clinical and adjunct faculty, they ought to be able to serve on Senate committees. And this issue got taken to the Academic Council at the systemwide level and duked out, and by that point the UCSF administration was supporting it very strongly, too, but systemwide just didn't want to do it. And I think the big resistance came from the campuses which didn't have medical schools, because they were looking at the ones that did have medical schools and seeing these large clinical and adjunct faculty that would become Senate members, and were afraid that their power would be diluted.

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So the thing hung up at the systemwide level, but at the end there was a kind of a "don't ask don't tell" compromise where UCSF just went ahead and did it, and even though the systemwide rules didn't get changed—and I was on the Committee on Committees when all this was going on; we just started appointing clinical and adjunct faculty to Senate committees, so that their voices would be heard. Now, if you had a committee, like Courses of Instruction, where—I didn't think we put clinical and adjunct faculty on there, too, now that I think about it, but there were certain committees where it made more sense than others, and a lot of them moved into leadership positions. So then the next big fight was systemwide came around, and we said, "Well, gee, adjunct professor X or clinical professor X has been serving with great distinction on committee Y on the campus, and we want to put them as our representative on the systemwide committee." Boy, the systemwide had a cow over that. And so the workaround that we came up with was the administration agreed to give them concurrent without salary appointments in

the Senate title, so they could then be appointed to sit as a UCSF representative on the systemwide Senate committee, even though they were actually being paid as a clinical or adjunct faculty member.

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So this took about seven or eight years, the whole process, but in the end I think we moved a lot of people into the appropriate series, so they had a lot more status, and had appropriate titles, and access to the decision-making process, and the other perks which come with being a Senate member. And then we also got the full-time clinical and adjunct faculty, who were appropriately, in those series, representation in shared governance at UCSF, and also systemwide. So it was a big—by then Larry Pitts had gone on and become the Chair of the Academic Council, so he had been the systemwide Senate head when the last part of this was happening, and was pushing it through from that perspective.

09-00:41:55

Burnett: And this is a bit of a moving target, too, isn't it, because one of the things that you're tracking over this period is that the ladder appointments are completely flat, and the clinical appointments are going up quite dramatically, and so one of the things that you point to is the lack of support around faculty, and the consequences of this growth of these other categories outside of the regular system.

09-00:42:30

Glantz: Right, although remember there's also the in residence appointments, which were growing. The ladder rank things were flat because the budget was flat, but there was growth in the in residence appointments, and, to a lesser extent, professor of clinical X. So the Senate was growing; it's just that these non-Senate appointments were growing faster.

09-00:42:55

Burnett: Yeah. Was there also a question, though, around the administrative support for those positions, irrespective of the Senate, the supports around—I'm calling them an administrative, but you could fill that in better—

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Glantz: No, I know what—yeah.

09-00:43:21

Burnett: —and was that a question that you were addressing in those committees?

09-00:43:27

Glantz: Yeah, we made the argument that the University shouldn't get bigger than it can sustain. And one of the arguments that was going back and forth was they were saying, well, the NIH and others have these career development grants they'll give people, and the NIH calls them K Awards, and also groups like the Cancer Society, Heart Association, other foundations have these awards for brand new faculty, or relatively new faculty, usually for five years, to really

help their careers get launched. And one of the arguments that never got totally settled was people would say, like the Department of Medicine at UCSF was saying, is, "We'll put you on the faculty if you can get a K Award, and if you can't, you're out of here," which I thought was very unfair, because I think, again, if the person gets the award and stays, the University's benefiting from them being there, but they're putting all of the risk on the individual. And so I was very much against that, and said, look, if the University's not willing to at least commit an in-residence appointment to them, meaning this is somebody we're looking to bring in as a long-term investment in the person, then they should just be told, "We know you'd like to stay here but go find a job somewhere else; we don't have a position," rather than saying, "Well, if you can get a grant we'll give you an adjunct appointment."

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And the argument that came back was, "Well, no, that's kind of like a super postdoc. That's like we're giving people five more years to get their career going, and then they'll move on to somewhere else." And that's kind of the Harvard mentality. And one thing UCSF, when I joined the faculty thousands of years ago, they said, "We don't do that." What I was told—and I think I talked about this before—when I said, "I'm only going to go on the faculty with at least an in residence appointment," it's like if the university wants me, I'm here. If I'm not a priority, the kind of things I would bring, then tell me and I'll go find a job somewhere else. And what I got told was actually when we bring people on the faculty here we're hoping they'll retire from here. We're really looking at the long term, and we want to bring in the best people and nurture them, and hope to see their career develop. And at Harvard the attitude is just the opposite. It's like, bring in a lot of people, and it's kind of survival of the fittest, and most people leave. And that attitude was sort of creeping in at UCSF, and I didn't like it. I didn't totally win on that one, but we made some progress.

09-00:46:55

Burnett: Yeah. I mean, there is this sense that UCSF, it brings in a lot of money, largely because of the emphasis on the Medical School and the College of Pharmacy. You can see how its revenue really does come from grants. Of course, all universities do, but comparatively it's an astonishing machine, right? And you can see how that would be tempting to have that. In other words, that power to bring in resources can then become a norm, right? So then you generate expectations. So where do junior faculty fit into a system that is just driven by the momentum around garnering financial resources to do research?

09-00:47:57

Glantz: Right, and my view of that—and this is one where I won some and lost some—I think—and maybe this is too Pollyannaish—the first decision should be programmatically, do we want somebody to do X, and if we do then we hire somebody to do X. And of course you need to write grants, and the

University doesn't have an infinite amount of funds, but the institution needs to invest in the person, and realize especially times are tough. People don't always get grants on the first try. But if you're bringing the person in because you need them programmatically, and investing in them, then people generally do well, if you bring in the right people. The alternative attitude is to flip it around and say, "If you can get a grant we'll let you stay." You have to have a commitment of a faculty appointment to submit these career development awards, but it was like there was a clear understanding that actually realizing the faculty appointment is contingent on getting the money, and I think that's wrong, and I think it's exploitative.

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And the other problem you have—and I saw this several times—there were a bunch of fellows in one of the divisions in [the Department of] Medicine who one year were very successful at getting K Awards, so they had a huge growth in the faculty that year, all in adjunct positions. Well, five years later the K Awards ran out. Times are tough, and several of them just couldn't keep the money flowing and ended up leaving. Now, one of the arguments would be, "Well, yeah, but look, they got a great education. This is assistant professor as super-fellow. They published, they got to hang around UCSF and become wonderful, and then they moved on to their next life." I just think that's terrible, and I think it's very demoralizing to people, and I think we would have been way better off if the division had been more selective in who they hired in the first place, and not had eyes that were bigger than their stomachs where they hit a wall five years later.

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And the other problem with this—and this is a problem that grows out of philanthropy, and extramural funding generally—is you're really turning the programmatic development of the institution over to external funders. And I raised millions and millions of dollars in grants. In fact, my administrator one year came in and said, "Did you know you are the second biggest grant holder at UCSF right now?" Which I was kind of surprised, but it's true. I was really good at that. And the money, the philanthropy we raised to create the Tobacco Documents Library and the Tobacco Center, it's all great stuff, but it's great if the University has a solid financial core and these are extra added-on goodies, but as state funding has been sliced, and as money has become more and more and more central, it's really shifted the power to decide the future of the institution to who's throwing money at you. And I think that's not a good thing for the institution in the long run. There's always that tension, and certainly you don't want to turn away generous support, but at some point the decision making over what we want to do needs to be more than who's willing to write a check right now. And it was a year ago now, but I got a call from some of the people in the faculty leadership at UCSF who were very concerned that the campus was really losing control of its own destiny, because it had been so successful at external fundraising, and the tail was kind of wagging the dog. These are all kind of tied together with who do you want on the faculty.

09-00:52:56

Burnett: Yeah. Well, it does seem to be the larger question of the nature of the research university in a market society, what's the role of planning in all institutions, including corporations, versus a kind of market rationale of let's be agnostic and see which way the wind blows, and then we can adjust our operations accordingly.

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Glantz: Well, I think things have gone too far in that direction. If the wind's blowing you might want to put your sails up, but I think you still want to know where you want to get.

09-00:53:30

Burnett: Right, and that gets to this question of governance, right? Do the faculty make decisions in terms of the research? And you do want this imbrication of research, orientation, and some kind of demand. It could be the state; it could be community groups; it could be the urgent requirements determined by the market, or by these exigencies that are identified by scientific research. But you also have to have a real sense that there's—well, I'll put that to you as a question: do the questions emerge from the research as an internalist philosophy of science position? Does it narrowly come from the research questions? The research goes in a certain direction, and you, based on that, go to the next step; it's internal to it? Or are there exigencies and demands that are coming in from outside of the research program?

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Glantz: Well, both of those things are always happening, and you don't want to be oblivious to the world around you. It's like COVID; [laughter] that kind of imposed itself on the scientific community. I'll give you an example that's been in the news now. I remember as COVID was really cranking up, a little bit before I retired, one of my colleagues said, "I'm starting to notice there are these people who aren't getting better, and I'm starting a registry of those people who have I'm calling it long COVID." Nobody thought it was important. Nobody cared about it. He was just stealing research resources from here and there to get it going. Well, that's turned into a big thing now. And I think one of the things—and I think we talked about this before—that makes universities important as an institution is people work on stuff that nobody else thinks is important, [laughter] you know? Which suddenly becomes important. And I think you need to protect that. And if everything is being driven by who on the outside is writing a check, and what are those people interested in, I think you lose—

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I remember going back to the debates over DoD [United States Department of Defense] funding at Stanford, and we'll talk about the tobacco money issue in a little bit. But I remember people saying, "Well, I have this great idea of something that would make the world a better place, but I can't get it funded so I can't do it." And I think universities exist to empower those people, and

even if they may not have the most hugest budget and most deluxe, fancy everything, at Stanford there was an active disincentive to do anything you couldn't get funded from the outside [see discussion of Stanford DOD SWOPSI report in Interview 3], and I think you need to have a system which tolerates and supports people with strange ideas that nobody else thinks are worth doing. And the concern that I have with UC [University of California], when I came there back in the seventies, and when the level of state funding and the institution's vision of itself as a public institution was a lot stronger than it is today, people had a good idea, and it wasn't too expensive where they could scrounge something up, fine, do it, and the connection to money and the market was a lot weaker than it is now.

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There are research institutes for hire that exist, and I think those are important and fine institutions that do contract research, and when somebody needs something done you can hire them to do it, and I don't think there's anything wrong with that, but I think the university historically grew up to go beyond that, and as a kind of insurance policy that somebody was thinking about stuff that wasn't important yet. And that, to me, is one of the big concerns, and I think if you're bringing junior faculty into an environment where you're picking things to do because you think somebody will pay for it, I think that's a big problem.

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Burnett: The marketplace of ideas [laughs] in a certain lens.

09-00:59:17

Glantz: Yeah, but it's like, yeah, too literally.

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Burnett: Yeah, right, exactly. It's amazing to go through the collections of oral histories that we have, and the interviews that Sally Hughes did with the AIDS researchers at UCSF, and there are these extraordinary stories like Marc [Marcus] Conant, who was describing the fact that they were coming across these extremely rare Kaposi sarcoma cancers that a regular physician might see once in a lifetime, and they were seeing them every week, and they just started to pick up on a pattern, and they grew interested, and they started getting different folks interested from different fields, none of whom had any funding for this. They're just like, we need to understand what's happening here, and they were coming from dermatology and oncology and genetics, and there was this research enthusiasm around solving a problem, and around helping people whom no one was interested in helping at the time, and certainly the federal government had no interest in helping until many, many years later. And it was this wonderful example of this blend between a humane understanding of their responsibilities to people who are suffering, their training, their scientific curiosity and medical curiosity to understand something, and their abilities to bend bureaucracies a little bit to get into a new area, because there's never a line item for the new, right?

09-01:01:16
Glantz: That's exactly right.

09-01:01:18
Burnett: And those are incredible stories in the Library's collection that speak to what you're describing. Well, there's more we can talk about. [laughter]

09-01:01:33
Glantz: That's why I like talking to you.

09-01:01:34
Burnett: There's more we can talk about with respect to the theme of external forces and pressures and demands, and the research orientations of the university. Does the university drive its research agendas internally, or are they vulnerable? Is there a kind of contamination model where too much influence from outside could potentially corrupt or forestall research in particular areas?

09-01:02:15
Glantz: Right, and if you go back and look at the DoD [Department of Defense] issue at Stanford [in Interview 3], that's exactly the argument we were making. We weren't saying people should be prohibited from doing military research as long as it's unclassified, which raised other issues, but we were saying what about the people who wanted to work in areas where there isn't somebody out there writing big checks. And this kind of gets into the tobacco issue, too: the whole idea of academic freedom evolved to protect the ability to ask questions [powerful] people didn't want asked. Initially it was the church, and then later it was big business, and the institution evolved to try to protect that, and the whole concept of academic freedom evolved to protect that process. And the university, as an institution, I think has a responsibility to itself and the reason it exists to protect that process and to make it possible for people to do research in areas that nobody on the outside thinks is worth doing.

09-01:03:32
Now, on the tobacco issue it was the other way around, where the tobacco industry was out there with money trying to manipulate the whole scientific process, and the academic freedom, there was this huge fight that we had that went on for years about tobacco money at UC. But I was arguing, and other people were arguing, that the tobacco industry understood science better than the scientists did, and their lawyers and PR people were using funding to manipulate the whole scientific process by steering people into certain areas, away from other areas, by generating false controversies about things that the industry didn't like. And this was all being done by simply supporting research. And so the argument that people like me were making is if you look at the University's fundamental mission of trying to provide an institution that has some level of protection and insulation of the knowledge generation and transmission process against those kind of forces, whether, again, it be the church originally, or big business later, that, in fact, taking the money from the tobacco industry was antithetical to the University's entire mission of searching for the truth, because the tobacco industry was very consciously

manipulating the kind of research and the people it would fund in order to steer the process away from the truth that tobacco was killing people. And so we said the University shouldn't be a party to that, that taking that money was, in fact, antithetical to academic freedom.

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Now, the argument on the other side was a kind of *Citizens United*, money is speech, you know. And for those of you who are watching this many years from now, *Citizens United* was the Supreme Court case where the Supreme Court said corporate money—and union money, but really corporate money—was equivalent to speech, and you couldn't regulate corporate political spending. And the argument was that what academic freedom means today is the freedom to take money from whoever you want, which I just think is—Again, I know more about academic freedom than is sometimes good for my personal welfare, but I said, no, that isn't academic freedom; that's laissez-faire capitalism. And if you have a well-documented, explicit strategy, which we knew about from the tobacco industry documents, and from the litigation against the tobacco industry, where the industry was consciously manipulating funding to steer knowledge away from truth, and we know that—people said, "Are you saying we shouldn't take money from anybody who's unpopular?" And it's like, no, I'm not saying we shouldn't be taking tobacco money because they're unpopular; I'm saying that they're using the money as a way to consciously manipulate the process against the University's core mission, which is the development and transmission of knowledge. We want to use this as a way to muddy the waters, to create doubt where there isn't any, and to just keep people confused, and keep the literature muddy enough that politicians can avoid regulating our industry. And the thing that drove me crazy in these debates is this wasn't people like me being paranoid, or intuitive. We had it all laid out there in black and white in the industry documents. And, in fact, in the federal racketeering case that was brought against the industry, one of the seven pillars of the case was the use of funding to manipulate the scientific process in order to defraud the American public. And the University should not be about defrauding people.

09-01:08:26

Burnett: Right. Well, a while back when you started on this commentary, you mentioned "we." Can you tell us when this particular issue becomes very live for you, and you become involved in that? So early 2000s, there's a raft of university policies—Harvard has one, I think, in 2000—to refuse money from tobacco companies for research; 2003, the UCSF Comprehensive Cancer Center refuses to take money. So that's at these small—Harvard's not a small case—but UCSF's Cancer Center is one thing; it's not UCSF and it's not UC. Tell me when momentum starts to gather around this, as far as you're concerned, and your involvement.

09-01:09:26

Glantz: Right. Well, I had been involved—I mean, ever since the [tobacco industry] documents started appearing, and we were documenting the tobacco industry's use of funding of universities as a way to manipulate the scientific process, which was starting in the mid-nineties when I first got the [tobacco industry] documents, and we're writing about this, and other people are writing about this, and there's movements started all over the world of universities—or, if not entire universities, schools within universities—to just say, you know what? We just don't want to be a party to this. And so it wasn't just Harvard. Major universities all over the world were starting to just pass policies, saying, "We do not want to take tobacco money for research." Many universities prior to that, including UC, had said, "We're not going to invest in the tobacco industry. We're divesting our tobacco industry stocks." But they started saying, "We now are really understanding we're institutions committed to truth. This is a fraud. We don't want to be a party to this. We're not taking their money." And the thing is it wasn't imposed from the outside. It wasn't some politician coming in and saying UC or Harvard or Hopkins or whoever, you can't take their money. It was institutions saying we're choosing not to take their money. And the university, UC and whatever university, has standards for whose money they'll take. There are certain conditions they won't accept in a grant, for example, things about restraint on prior publication, for example. And so we started saying, "Well, hey, we're like UC. We're where the documents live. We should not be taking this tobacco money."

09-01:11:41

And so I think the first UC unit to say "We're not going to take tobacco money" was actually the Cancer Center at San Diego, I think, UC San Diego. And so a movement got started to have if not whole campuses, at least units on the campus, just say, "We're not taking that money. It's inconsistent with our mission. We don't want to be a part of the fraud." And somewhere in the middle of all this I was invited to give the commencement speech at the School of Public Health at Berkeley, and there was a case out of UCLA where a researcher there had gotten funding from the tobacco companies, and actually we found in the documents where he told their lawyers, "If you fund me, I'll do a study and show that passive smoking doesn't cause cancer," which he then did and published. [For details of this incident, see Bero LA, Glantz S, Hong MK. The limits of competing interest disclosures. Tob Control. 2005 Apr;14(2):118-26. PMID: 15791022; PMCID: PMC1748015.] And I think I talked about that example, and said, this is obscene. This is just not what the University's about, and we should not be taking tobacco money. And that got a whole discussion going at Berkeley, and the School of Public Health there, after a great deal of discussion, said, "We're going to stop taking tobacco money." Other units at UCSF voted to do it. I don't remember what led to the campus-wide faculty vote, but we had a campus-wide faculty vote, and the faculty voted as a group very heavily that we really didn't want to take tobacco money.

[Documents related to the tobacco money debate at UC are available here: https://senate.ucsf.edu/tobacco-funding

This is a list of materials on the UCSF Senate site: https://senate.ucsf.edu/search-results?cx=002397996458189900067%3Asbboyy5pi8w&cof=FORID%3A9&ie=UTF-8&q=tobacco.]

09-01:13:28

So this was spreading around the system, and what happened was Bob Dynes, who was [UC] President at the time, who brought us the Compact for Higher Education with Arnold Schwarzenegger and the basic decision to privatize the University—and a strong element of that was raising money from industry—he just had a cow over this, and really came out hard against it. He got the systemwide Academic Senate to take a position against it, that this was an infringement of academic freedom. And at that point, around then I was chairing the systemwide Committee on Planning and Budget, so I was on the Academic Council when a lot of this stuff was getting discussed. This went on for several years, and I don't remember all the details, but somehow I had heard that Dick Blum, who was then the Chairman of the Regents, was on the right side of this issue, but as faculty we're not allowed to just pick up the phone and call the Board of Regents. That's against the rules. And I don't remember how it happened, but I got a call from Dick Blum, or a message, "Dick Blum wants to talk to you." So this is, well, I didn't call him. If he wants to talk to me, I don't want to be rude. So I had a call with Dick Blum, and I thought about my talking points, and this is not what the University stands for, and what academic freedom is there for and all that. And he gets on the phone, and I start my little spiel, and like five seconds into it he interrupts me and he said, "Look." He said, "I'm the Chairman of the Board of Regents. Part of my job is maintaining the reputation of the University of California, protecting the reputation of the University of California, and being in bed with a bunch of murderers isn't good for the University's reputation, so I'm on your side." [laughter] And so I said, "Oh, well, okay, well that's nice."

09-01:16:02

So Blum engineered an effort at the Regents to pass a policy just saying the University isn't going to take tobacco money. And he didn't introduce it himself—he got one of the other Regents to do it; I can't remember who it was—but that was brought up, and I was invited to speak to the Regents about this. And the night before, everybody was pretty sure it was going to pass, which would have made UC the largest university system in the world to say "no" to Big Tobacco. And Dynes just pulled out all the stops, and he got Sherry Lansing, another Regent, who, as head of Paramount, had a terrible record on smoking in the movies, and she led the charge on Dynes' behalf against Blum, and ended up defeating Blum, which I think was just an amazingly dumb move on Dynes' part. And I think later Dynes was invited to step down as President, and I don't think—I mean, Dynes did a lot of bad

things as President of the University, but I think this was probably somewhere on the list of reasons [for removing him as president].

09-01:17:24

But what ended up happening—and I can't remember if it was all at the same meeting or if it took a couple of meetings—is they ended up passing something called RE-89, Regents Policy 89, on tobacco money, and it supported Dynes in that it prohibited units within the University from declining tobacco money [as a blanket policy], but it did recognize that the tobacco industry was kind of a special case, and so it set up a separate process whereby if anybody wanted to put a grant in, or accept a grant from the tobacco industry, it had to go through some extra review, and the chancellor at the campus had to personally approve it. And the net result is there were three or four tobacco grants at the University at the time—there were none at UCSF but [there were] at UCLA, I think, and maybe Davis or San Diego; I can't remember—but what happened is those grants ended up not getting renewed, and a few years later there was no tobacco money at UC. And since then a couple have slipped through, mostly e-cigarette related stuff, but while we felt very let down at the time, we actually did pretty well with RE-89, I think. [For details and follow-up on RE-89: https://tobacco.ucsf.edu/search/node/RE-89.]

09-01:19:01

Burnett: It seemed to be kind of like a sunshine law, in that annual reports were required to be made to the Regents, listing—

09-01:19:08

Glantz: Right.

09-01:19:09

Burnett: —all tobacco industry donations or grants, and where they go, and so just drawing attention so that nothing can be done sub rosa, and that in itself served as a disincentive.

09-01:19:29

Glantz: Yes, I think so. One of the things that happened, we uncovered this grant from Philip Morris at UCLA where they were taking kids and putting them into brain scanners, kids who were smoking, and it was nominally to do antismoking stuff for kids but I can tell you it's providing Philip Morris exactly what they need to know to optimize a Marlboro to make it as addictive as possible. And we told Blum about that, and he wanted to look at that grant, and UCLA wouldn't give it to him. It was really quite amazing. And that's one of the things that led to the sunshine provisions, is the University was refusing to provide—people put in Freedom of Information Act requests, and they were refusing to release that information. And I think if there's one thing universities should be about, it's openness and full disclosure and full discussion, even when you don't agree. And, again, they were saying for academic—I mean, it was just such a total perversion of academic freedom.

They were saying, well, to protect academic freedom of these investigators, we're keeping all this confidential. It's ridiculous.

09-01:20:52

Burnett: Well, I want to pull back for a minute. We've talked a lot about institutional structures, and we've talked a lot about your career, and we talked a lot about the philosophy of knowledge production; let's put it that way. What does the University—as you understand it, both in its ideal form and the way it works right now—need in terms of people? Let's say that there's the mass of researchers out there who operate in a certain way, kind of the normal researcher, if you want to put it, in a normal distribution. What does the University need in terms of advocacy, in terms of someone who's watching what's going on? What kind of person do you have to be to do that kind of work?

09-01:22:01

Glantz: Well, in the current environment—I think a lot of the problems the University is having right now are because of the Compact with Higher Education that Dynes entered into with Schwarzenegger, which fundamentally privatized the University, and shifted it away from being a public institution. And that's happened long enough ago now that there aren't a lot of people who remember what it was like when the core—I mean, the University's always had lots of outside money, but the core budget to kind of keep the doors open and do its fundamental mission, and some internally generated research, was coming from the taxpayers. And I think the fundamental thing we need now is leadership that will get that back, because all of these other problems I think grow out of the problem we identified in the futures report that we talked about, where the University just is starved for its core financial needs. And we don't have it. As I told you, I almost got something going with Janet Napolitano until the accusations were made against me and I just got dropped [i.e., she stopped interacting with me].

09-01:23:27

But I think it's remarkable that here we sit in 2022, when the State has a huge surplus, and the Governor and the legislature are talking about what to do with it, and a lot of good things are being thrown around, but I haven't heard one word about rebuilding higher education in California broadly, the kind of thing that we talked about in the $66 fix [discussed in Interview 8]. And I find that very disappointing. I think the leadership at the University, at the level of the Regents, at the level of the President, and at the level of the Chancellors, the senior people, the people who are the public face of the University, at least at a policymaking level, nobody is saying, hey, the State's in great shape. New Mexico, of all places, is getting rid of tuition, which would make a huge difference in terms of student debt, or new student debt. California once was the epitome of the public university, of the very high-quality, state-funded public university that everybody could go to if they did the work to get in, that they didn't go bankrupt going to it, they didn't have to go hopelessly in debt to go to it, and we want to get that back.

09-01:25:02

And now would be a good time to be making that argument, and I just don't hear that coming from anywhere, this idea. The whole argument is like, well—I think Biden has moved in the right direction, trying to get rid of student debt. And the whole fight is like, well, should we cancel? I mean, he's been doing it for people who got cheated. But if you say, well, let's cancel $10,000, or $15,000, or something, of student debt, and the argument you hear back is, well, but that'll help some rich kids, too, well, not really, because the rich kids didn't go into debt. Their parents just wrote checks. A few of them did, but for the most part the change that occurred with the Compact, and when I was on the systemwide Budget Committee and chairing the Committee, was to replace State funding with debt. And it's been a catastrophe. It's been a catastrophe for the students, it's been a catastrophe for the society, and it's been a catastrophe for the institution. And I think when Bernie was running for President, this idea that people should pay taxes to get a free higher education, and then if they graduate and make a lot of money then they get to pay taxes to help pay it back, and I still think that's a very logical argument, and something that the public would be willing to hear. And, as I said, there's a couple of places like New Mexico and Tennessee, for junior college at least, where people are doing that.

09-01:26:57

But I think the University needs the most is that, because I think if the University was back on a solid financial footing, which meant it could cover instruction, it could keep the doors open, it could do a reasonable—not a huge amount, but a reasonable—amount of internally-funded research, where everybody wasn't constantly having to figure out how am I going to scrape together two nickels to rub together to do anything, that would release the pressure on a lot of these other things. And as I said, when we were having the fight over a period—it went on for several years—about the tobacco money, I got told by my leading protagonist in the administration, "We know you're right. You're right about the University being manipulated, but the President [Dynes] wants to be business-friendly to get money." And the irony of it is it didn't work. You could say, "Okay, we'll make a deal with the devil if we're okay," but, in fact, it didn't work.

09-01:28:07

Burnett: You got chumped by the devil. That's even worse.

09-01:28:09

Glantz: Yeah, yeah, yeah. And the whole problem—we talked about it—it all comes back to unreimbursed indirect costs. The more money you take from grants—and for philanthropy it's an even bigger problem—that generates unreimbursed indirect costs for the University. And, again, if the University was in good financial shape and you're having to take a little bit of discretionary funds to subsidize this extramurally funded work, then you could think of it as leverage. I'm spending a little bit of money, and I'm getting a wonderful Tobacco Documents Library out of it, or I'm getting wonderful

research on this or that, or some great public outreach program. But if you turn it around and say, "I'm chasing money for that stuff to compensate for the fact that I don't have my core financial foundation," then it runs in reverse. You're basically taking more and more money away from the core activities to subsidize these externally driven things, and that's a bad thing.

09-01:29:19

Burnett: Right, right. Well, thank you for a very specific set of remedies. And one of the things that I was thinking, especially when you said it's been long enough ago, the compact has been long enough ago that people don't remember that things were different, and I wonder if what you exemplify, not just as a researcher but as a citizen of the University, and of the State, and of the country, is that you see that change is possible, as opposed to a structural impasse. I think there's a remarkable tendency among folks, I think perhaps myself included, if I'm honest, to see this as how things are and it's difficult to change, and/or it's this way for a reason. It was designed this way, and it's somewhat optimal, right? And in spending hours talking with you, I see that your default position is that what you were given is probably suboptimal, and you're confronted with evidence that it is suboptimal, and not only is it suboptimal but that it is open to change. It's possible. It takes work—you have to mobilize people; you have to convince people; you have to argue, and you have to fight—but movement is possible. And I see that in the decades of your work that you have been able to move the needle in areas that seemed completely natural, right? And I think a big part of your influence has to do with inspiring people to see things not as given but as something that can be altered with some effort.

09-01:31:41

Glantz: Yeah, but the key thing you said is "with some effort," because change is always hard, because if it was easy it would have already happened. And there are forces lined up that are doing quite well under the status quo, and they're going to fight you. In fact, this calligraphy [in a framed quotation hanging on my wall] you can't read because it's too faded that was given to me a long time ago [1986 by Americans for Nonsmokers Rights] is my two favorite quotes, and one of them was from Machiavelli, saying something like, "There's nothing more difficult to take into hand, or more uncertain in its outcome, than to bring a new order to things, because those who've done well under the current system will fight you as partisans, whilst those who may do well under the new system will support you lukewarmly." And he's absolutely right, you know? The other quote is from Kermit the Frog [at the end of *The Muppet Movie* (1979)], and it's, "Life's like a movie. Write your own ending. Keep believing. Keep pretending." And I look back, and when you're trying to do any of these things it's hard, and God knows I've had to deal with active opposition and people who've come after me, but I don't regret it, because we did make a lot of differences, and things are a lot better than they were before. [Here is the full Machiavelli quote from *The Prince:* "Any it ought to be remembered that there is nothing more difficult to take in hand, more perilous

to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order to things. Because the inventor has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. … Thus, it happens that whenever those who are hostile have the opportunity to attack they do it as partisans whilst the others defend lukewarmly."]

09-01:33:34

Getting back to what we were talking about in the beginning, even if some of the changes we made out of the Armitage report have kind of gotten a little squishier, there are still 400 or 500 people whose lives got better, and many since then. It never totally went back to the old ways. And at one hand you have to be realistic, and realize things are hard, and you're going to lose more than you're going to win, but you have to realize that you can win some of the time. And if you compare where the world is generally, even with everything that's going on today, it's still in a better place than it was 50 years ago. And it's just very disappointing to me that our efforts, which were done through the Committee on Planning and Budget, and then through the Faculty Association, and the $66 Fix thing, that we never succeeded, or I never succeeded, at getting what I call grownups, people in the University leadership, to just go out and say—why isn't [UC President Michael V.] Drake giving speeches today, saying, "The State has a gigantic surplus; let's put the University back to what it was in the sixties and the seventies"? You don't even have to go back that far. I think we took as our index date 2000 or something, before they went off on this privatization thing. And yeah, well, that means some rich kids will get to go to school without paying a fortune in tuition, but we'll just make them pay taxes later. And it's just very disappointing that nobody in the leadership—they've all accepted this sort of Milton Friedman-esque model for the University, and it doesn't work. The University is a much less robust institution than it was—it's richer now, because of all this outside money, but than it was. And I think the students have many fewer—

09-01:36:06

I mean, I don't want to be total gloom and doom, but when I graduated from college I was broke, and that was kind of a drag, but I wasn't in debt up to my eyeballs to where it was crushing opportunities to move forward, and I think that the leadership in academia needs to be more sensitive to that, and that this idea—I was in on the arguments. It was called the high-fee/high-aid model. It's basically tax the students to give some financial aid to others, so it's like taxing education. Well, if you want to encourage something, you don't tax it. And I'm just surprised that nobody said, well, the student debt crisis is a huge problem, but at least we could stop making it worse. And I just don't see anybody in the University leadership now making that argument. And with the State, with $50 or $100 billion surplus, they could take a little, tiny bit of that and use it to just get rid of tuition and the whole—and the other thing: it's not just getting rid of the tuition, as we pointed out in the $66 fix; you need to get

the money back so that the University's core operations are being paid for by the people, not scraped together from billionaires.

09-01:37:46

Burnett: Well, one of the great advantages of youth, right, is this potentially long trajectory of life, and that it can engender a spirit of risk taking, that you can go down a path, and you have opportunities to back out and try another path. And what excessive debt does is it burdens them with the worry of the old, right? That you're unable to move. And I've heard from so many young students about how paralyzed they feel.

09-01:38:23

Glantz: Yeah, and they are, and it's just unconscionable.

09-01:38:28

Burnett: Yeah, yeah. But you also mentioned the same thing with scientific risk, right? And so needing to provide a baseline to give them maximum latitude in terms of the pursuit of research questions that are not necessarily supported, but for the inquiry and the curiosity of the individual or the group practitioner. And so all of that risk taking, on the part of the student and on the part of the researcher, is being hamstrung by the impositions that we place on them with this current system.

09-01:39:20

Glantz: Yeah, and that's why the whole argument that taking tobacco money is supporting academic freedom just makes me crazy, because academic freedom is there to protect that process, not to say, well, "money is speech." That was such a frustrating—I remember when the whole thing finally wrapped up, I think I was no longer on the Academic Council, but I was in the Academy Assembly, which is the giant committee that meets four times a year from all the campuses, and this came up there. And this was going to be debated by the Assembly, because the Senate was still on the wrong side of the issue. They were just trying to sandbag the whole thing. That's how it ended up at the Regents. It was like, well, we shouldn't do this; we'll give it to the Regents. And I took Judge Gladys Kessler's 1,600-page ruling in the federal RICO case with me [United States v. Philip Morris USA Inc., 9F. Supp. 2d 1 (D.D.C. 2006) Documents archived at https://www.industrydocuments.ucsf.edu/tobacco/research-tools/litigation-documents/], which was like that [indicates one foot] thick, printed on both sides, and the Chair of the Senate was like, "Oh, freedom, and we have to protect unpopular lines of inquiry," and all that, which I agree with, but this wasn't about protecting—I would say, if somebody wants to do research saying that smoking is a good thing, and they're not being paid to do it by tobacco companies, God bless them. I've taken lots of unpopular or contrarian positions, where everybody thought I was crazy, too, in the beginning. We usually prevailed. But it's like, no, this is undermining the integrity of the entire process, and, in fact, we have a federal judge after an eight- or ten-month trial who concluded that the funding of research was in support of the

commission of a fraud, and ordered their research organizations disbanded as fraudulent. And he said, "Well, I'm not familiar with that." And I remember taking that giant binder and just dropping it on the desk and saying, "Here, read this." And his rejoinder—he's a law professor—he said, "Well, it's on appeal now." What bullshit. [laughter] What total bullshit.

09-01:42:08

But RE-89, as we talked about, ended up getting rid of most of it, but it's still disappointing that UC—which is the place where a lot of the research that led to this understanding [of how the tobacco industry attempted to manipulate the scientific process] was done, and where the documents are housed—just hasn't said, "We've read what's sitting in their library and we don't want their money anymore." It's too bad.

09-01:42:39

Burnett: Yeah, yeah. Well, you identified some values in the two quotations that you mentioned, one by Machiavelli and the other by Kermit the Frog. You're keeping two things in mind, right? One is the world as it is, in all of its disappointments and all of its Machiavellian qualities; and this world of possibility that is sentimental and full of possibilities, quite possible wrong a lot of the time, but we hew to that fiction because it's necessary. And the other thing that I think of is *tikkun olam*, which is to repair the world. And I don't know if there's any promise as part of that that the world gets repaired in the end. [laughter] It's that you have to do it. It doesn't matter that it results in everything being perfect in the end [or not]. It's the process that matters. That's the encouragement, is you have to do it. You have to go do it.

09-01:43:47

Glantz: No, and I'm animated by that idea. But it's just so disheartening. The *PBS NewsHour* has a section they call "Rethinking College," and it's like, is it worth going to college? And they look at the economics of it and all that. It's very sad that people are asking that question. I think that the universities should be in the position where it's just a good thing for people to know more, and to be better educated, and to have a broader horizon, and we want to make it as easy as possible for people to do that. And it's not like it's impossible. We used to have a system that functioned actually pretty well, and I still would love to see it back. That was another thing that so frustrated me in talking to the administration about these things. It's not like we're looking for a cure for AIDS, or getting to Mars, or something where we haven't done it. We've made a lot of progress on AIDS, actually, but a vaccine for AIDS would just solve the problem. That may be possible; it may not. But having a higher education system, which is freely available and of high quality and accessible to everybody at an appropriate level, California did that for twenty or thirty or forty years, and so it's not like you're asking for something that can't be done. It's just a matter of having some leadership with the vision and the political gumption, and being crazy enough to just say, "Let's do it again" And I think if we had that, a lot of these other problems we've talked about—and a little

bit of self-control. This thing of, well, if you can get a grant you can stay here, that's just so obnoxious. But anyway, okay.

09-01:46:20
Burnett: Well, Dr. Glantz, I want to thank you for taking the time to talk with us again, and I think this document will serve a lot of people well in the future.

09-01:46:30
Glantz: Well, I hope so. Maybe thirty years from now somebody will read it and decide to act. [laughter] Who knows?

09-01:46:36
Burnett: No, sooner than that, and possibly in video form. It's not just a transcript; it's going to be in different media.

09-01:46:42
Glantz: Yeah, well, that's right. One other little thing, in wrapping this up, even though it's going to be in the middle, is one thing that's impressed me over and over and over again, when you talk to people who've been successful and who've changed things, they all tell you what a hard time they had. I remember seeing Leonard Bernstein interviewed about how nobody wanted to produce *West Side Story*, because it was all crazy, and George Lucas had a terrible—nobody wanted to produce *Star Wars*. And over and over and over again, people have visions, and they are too crazy to stop, [laughter] you know? And then in hindsight it's like, oh, they were geniuses. And I think one of the things that is very important is to keep that going, and to have the University—that's an institution which is supposed to be encouraging that kind of thing, and supporting it, and nurturing it, and there's nothing in there about funding. If you want to do something, yes, you have to go find the wherewithal to do it, but where the money is an instrumentality to achieve a goal, rather than an end in itself.

09-01:48:13
Burnett: Right. Thank you.

09-01:48:16
Glantz: Thank you.

Appendix: Smokefree Movies Interview with Stanton Glantz

Interviewer: Holly Stewart

Interviews conducted June 10, 18, and 24, 2015

Introduction by Stanton Glantz

In reviewing the transcripts of the interviews with Paul Burnett, I realized that the one important activity that was not fully developed was my Smokefree Movies campaign. This evidence-based education/advocacy campaign, whose goal was to reduce the value of films as promotional devices for cigarettes, started in 2001 and continued through my retirement in 2020.

The substance of the campaign is well-documented in the SmokefreeMovies.ucsf.edu website I developed and maintained as part of the campaign. The site, which is archived at https://web.archive.org/web/20210401000000*/https://smokefreemovies.ucsf.edu, also reflects the changes in the substance, focus, and tone of the effort as the campaign evolved over the years.

What follows is drawn from three interviews I did with Holly Stewart, an MD/PhD student whom I hired in 2015 to interview many people involved in the campaign to prepare a history of the effort. (We never finished the history.) While the website documents the substantive activities of the effort these interviews provide the backstory of how it developed.

The transcript has been edited for flow, clarity, and to remove extraneous material and the interview questions. There is also a comment at the end on the overall impact of the effort.

Comments that are not part of the original recording are inside square brackets. The original audio is not archived with The Bancroft Library.

Interview: SFM-Stewart-Glantz-2015-06-10-Audio

The issue of smoking in the movies has been around for a really long time and back into at least the '40s when the AMA was bent out of shape about it.

The 1980 movie *Superman 2*, which had Marlboros plastered all over it. And there was a big fuss raised about that. And, in fact, if you look at a bibliography on the Smokefree Movies web site, a guy named Paul Magnus wrote an article about it.

And there were congressional hearings about it. Congressman Thomas Lukens held hearings on it. There was a big fuss raised. And that was what kind of re-interested the public health community in the whole issue.

And there were a bunch of meeting that went on for many years between various actors—actors not in the sense of Hollywood actors, but organizations—to try to engage Hollywood to do something about this

And there was an effort, and I don't remember the order, but the American Cancer Society did some things. The California Department of Public Health Tobacco Control section funded several projects to engage Hollywood.

There were people at UCLA who somebody funded to work on it. Robert Wood Johnson Foundation was doing some stuff, I think. The CDC had a person down there whose job—a woman named Melissa Havard—whose job was engaging Hollywood.

And it was pretty much all being done with a kind of "let's get together and quietly work this out behind the scenes." And I was not a leader in any of that. But I participated in some of it.

And we had several meetings at the studios. And it's I mean, the one thing—like [*The Player*] which is a vicious parody of Hollywood. It's the most slimy, dishonest, scummy place on the planet because everybody is trying to screw everybody else. I mean, there's a joke down there that it's like how do you say "Fuck you" in Hollywood? And it's like, "Let's do lunch."

And there's all kinds of creative accounting to try to cheat people out of money that they're due. And plus, they make movies so they're into fantasies, you know?

Since the beginning of the motion picture industry, people have been complaining about them: too much sex, too much drinking, too much violence, too much this, too much that, and they're communists, and the whole McCarthy-era thing, and the blacklist, That's actually a very important part of this story.

Back in the early '50s, Senator [Joe] McCarthy, and the House Un-American Activities [Committee], they really went after Hollywood in a big way and said they were a bunch of communists. And something was created called the blacklist, which was basically people who couldn't get jobs because they were viewed as politically unacceptable.

And one of the people on the blacklist was [actor] Sean Penn's father, who was a writer. [Sean Penn was an outspoken critic of efforts to get smoking out of movies as an attack on creative freedom.] And later—you know, he's become one of the big opponents on all of this, although I am now—I actually have a picture of him [Penn] hugging me [when we met at the Mill Valley Film Festival and he understood we were advocating an R rating for smoking, not a ban], which to jump forward many, many years.

But so, there's a tremendous suspicion down there of anybody meddling with them. And as I told you before, they're kind of like professors. The creatives are creative and they want to be left alone to do what they want.

The business people want to make as much money as they can. And they don't want anybody bothering them. And so the whole culture has evolved over time to have a really strong immune system and be really good at rejecting foreign bodies.

And they're used to being people demanding of them. And they're used to not doing them. And one of the ways that they do it is they pretend to be your friend and express great concern and then don't do anything.

It's a little bit like when I was a kid, like there was this clown on television called Bozo. And I remember when I was a little kid, they had this Bozo, but it was like a big blow-up doll that was four or five feet tall with a weight in the bottom. And you'd punch it. And it would go down and then pop up again. And so they're a lot like the Bozo dolls.

They're use to being hit and then bouncing back. And one of the ways they do this is by meeting with people, by inviting [you to meetings]—it's a very glamorous place. You know, you get invited to the studios.

You get taken into very fancy offices. You're given fancy finger food. You're meeting with important people. And they all are very concerned and their grandmother died of smoking, and yada, yada, yada.

But there is the First Amendment, and we [the studio management] don't really have any control. And we feel your pain. But—and we'll certainly think about it. And we'll—well, let's work together to avoid the problem.

And then when you get back out in the street, you realize your pocket's been picked. And so this has just gone on for a long time. And again, I wasn't playing a central role in it. I was sort of following some of it.

I helped start the organization, which is now called Americans for Nonsmokers' Rights.

And [when I was President] I used a little bit of the money to hire a guy down in L.A. who was going to go kind of help us get ins in Hollywood and start dealing with the problems.

And the other thing about Hollywood is since everybody knows—they know that everybody is trying to get to them to get their "save the whales," "stop abortion," or whatever issue you happen to want in the movies somehow or to keep stuff they don't like out somehow.

There's this whole subculture of bottom-feeders who make a living acting as intermediaries. And they kind of, "Yeah, I know somebody and I could talk to them and get you a meeting," and la, la, la, la.

If you have a lot of money, then you just pay people to do it with product placement or product—there are many, many forms of product placement or ways to get something into a movie beside a product placement contract and paying people under the table.

The system is very permeable because if you go back into the golden age of the studio system, everything was very top-down. And the stars all acted under and the big-name directors were all under contract to specific studios. They didn't go to the bathroom without permission [from the studio].

But now, it's become much more decentralized. There's a lot of independent production companies, many of whom aren't actually independent.

Like, we made a big fuss about the movie *Rush*, which Universal—which is like one, big Marlboro commercial. And it's about Formula One racing, which was sponsored by Marlboro. So, it's historically accurate. But they really went way beyond what they had to do.

Now, it was an R-rated movie. So, we didn't make too much of a stink about it [because we were campaigning for an R rating for smoking]. But Universal's comeback was that they guy who produced it had his own independent company

Well, the independent company was in an office on the Universal lot, you know. So, they would sublet it to him. So, there's a lot of these kind of fictional relationships that have to do with money, and liability, and egos, and all of that.

And so if you look in the [tobacco industry] documents you find product placement deals. But you also find cross-promotion, where they plug you and you plug them.

You find prostitutes. You find jewelry. You find cars, you find people getting paid rent. You find all kinds of things. You find inviting some up-and-coming struggling actor or director to the right party where they meet the right people.

That is worth a lot. That's probably worth more than a check because everything in Hollywood so much runs on personal relationships and connections.

And so that had been going on for quite a long time. That's one part of the story.

And at some point along the way, and I can't remember when it was, Steve Schroeder, who had been a chief in general internal medicine [at UCSF] took a leave and went off and became the head of the Robert Wood Johnson Foundation [and] got them interested in tobacco.

The way that he framed it for internal political reasons in terms of RWJ and getting it past the pretty conservative board was it was all kids. Kids, kids, kids. That's where the Campaign for Tobacco-Free Kids came from. All kinds of kids.

I was quite critical of a lot of that because I've written stuff going back a long time saying focusing on kids is not a good idea because kids smoke to look adult. And the tobacco companies run "kids shouldn't smoke" campaigns all the time, which actually sell cigarettes.

I was pretty critical of RWJ. But they called me up. Some program guy called me up and said, "We want to get into tobacco. And you're one of the intellectual leaders. And we'd really like you to submit a grant because we want to support your work [on secondhand smoke policy making]."

When you work at foundations, it's really different than the government. With the government, you write an application; there's a bunch of rules. You write a big, long, complicated application.

You send it in. They have an independent review committee. It gets scored. And then they more or less follow the scores in deciding who to fund.

With foundations, it's much more idiosyncratic. Now, some foundations do act like the government. Some—and some non-profits like the [American] Heart Association act like that.

But at a lot of foundations, it's much more targeted. And it's much more built on personal relationships and all. There's a lot of politics. And it's like you build up a relationship with a foundation and they like you.

That's why [the American] Legacy [Foundation] keep supporting the movie campaign. And we do lots of stuff together.

So when you're writing your grant with a foundation, typically, there's a moderate amount of negotiation that goes on before you actually formally submit it to frame it for what they're looking for.

And if you don't want to do what they're looking for, then you don't put it in. So, we [RWJ and I] went back and forth several times. I put the thing in. And then some time later, there was all this hemming and hawing.

The guy [the RWJ program officer] calls up and says, "You know, we really"—and I had given them a fair amount of help in terms of thinking about the problem and all that other stuff, which I do for anybody who asks anyway.

He said, "You know, you're just too controversial. We're afraid to take this to our board. We feel really bad, but we're not going to fund you." I was kind of pissed off. But that's life.

That happened a couple of times. Then they had heard that I was getting interested in the movie issue. By then we had done a little bit of research where we quantified how much smoking was in movies [Hazan AR, Glantz SA. Current trends in tobacco use on prime-time fictional television. Am J Public Health. 1995 Jan;85(1):116-7. Doi: 10.2105/ajph.85.1.116. PMID:

7832246; PMCID: PMC1615263.; Hazan AR, Lipton HL, Glantz SA. Popular films do not reflect current tobacco use. Am J Public Health. 1994 Jun;84(6):998-1000. doi: 10.2105/ajph.84.6.998. PMID: 8203700; PMCID: PMC1614937].

They were very interested in that. They wanted to support that. And so I was like, "Well you guys have—you know, you don't really seem to be able to close the deal with me."

And, "No, no, no. This is fine." And so I put something together. And the same thing happened: "You know, we really feel bad. But we just can't fund this because you're just too controversial."

Some time later, I get a call from the Berkeley Media Studies Group. They had been approached by RWJ to basically do what I proposed to them.

And they [BMSG] had told RWJ, "We do alcohol. We're not smoking experts. Why don't you get Stan Glantz to do this? He's already done it." [RWJ responded,] "Well, you should take our money and hire him as a consultant to help you do it."

So, they [BMSG] called me up [about becoming a consultant]. I said, "Don't take it personally, but tell them [RWJ] to go fuck themselves. And I am not going to have anything to do with these assholes ever again." And for several years, I didn't talk to them [RWJ]. If I got invited to a meeting they were sponsoring, I didn't go.

I just had had it with [RWJ]. To me it was becoming an abusive relationship. And it was, "to hell with them."

Then I got the documents. We did all the document stuff. They [RWJ] were putting a lot of money into tobacco. And a lot of the things they funded were good.

But it was kind of making them, in a way, look bad that I was the one major player out there that they didn't have any relations with.

And then The American Legacy Foundation gave us 15 million dollars to build [the Tobacco Center] and the Legacy Tobacco Documents Library. They [RWJ] really looked even kind of more out in left field to a lot of people.

And then they [RWJ] created this thing called—an award kind of modeled on the McArthur [Foundation] Award [that is given to "geniuses" selected by the Foundation without people personally applying]. [RJW's new program was] called Innovators Combating Substance Abuse. It was a three-year, $300,000 award. So, you got $100,000 a year for three years and you couldn't apply for it. You had to be nominated.

I got nominated. I got a call from them [RWJ] saying, "Congratulations. You've been nominated for this. But we need you to send us a CV." And I said, "No, I'm not doing this. I am not wasting any more time with you guys. You're just going to jerk me around. No, I'm not doing it."

Then I start getting phone calls from friends of mine saying, "Look. Send them the damn CV. They feel really bad about all this history. And they want to support you because they haven't done it. And just send them the damn CV."

So, I said, "All right" and sent them the CV. And then a little bit later, I got another call [from RWJ] saying, "Congratulations. You made it past the next step. And we want a brief proposal for what you would do with the money."

And I said, "Aha! Now you're going to screw me and waste my time. I'm not doing it. To hell with you." And then I got phone calls from people, saying, "Just send them a proposal. They really want to support you."

So, I wrote them a one-paragraph proposal: "This [onscreen smoking in movies] is a problem. Nothing else has worked. The quiet, behind-the-scenes meetings have failed. What I want to do is drag the whole issue out in the open and make a big fuss about it."

[As discussed later,] there was a rationale for doing that. And so sent it in. It was kind of like daring them to fund it.

And then I get this call, "Congratulations. You've been selected for an interview. And we want you to fly back to Washington, DC for an interview."

I spend way too much time on airplanes. I get jet-lagged when I fly [from San Francisco] to L.A. I'm not coming back there. To hell with this.

The same thing happened. Everybody said, "Just go back there." So, I flew back. The interview was near Washington National Airport.

So, I flew into National. But they didn't have any non-stop flights from San Francisco to National. You had to go through Chicago.

Chicago can be a really hairy airport to go through sometimes because of delays. Because it's so big and the weather can get weird. So I ended up getting in to-to the hotel at 2:00 in the morning. The interview was at 8:00 in the morning. I was the first one. And I had some trouble getting to sleep because of being wired from the trip.

I went down to do the interview. I saw it as pro forma. I don't give a rat's ass. They even said "This was a very brief proposal you submitted." [Laughter]

And they said, "Why? Why are you doing this?" It's like, "Well, nothing else has worked." One of the reasons we call it Smokefree Movies is because in the whole smoke-free places effort, which I knew a lot about because I was one of the people who started it, [taught me] that you never win [against rich, powerful opponents] in the back rooms, ever.

When you go into a back room—and this is a general principle—he people with the power and the money always win in the back rooms. And there are a lot of things, like when you're talking

about tobacco, where the public is on your side. And that can give you a lot of power [in a public debate] if [the public] is properly mobilized.

And so what these people [the studios and other powerful players] want to do is keep everything out of the public eye. I mean, if you look at the whole debate about the Trans-Pacific Partnership [a trade treaty President Obama was promoting] that's going on right now, that's why they're [advocates for the treaty] keeping the whole thing secret.

It's because if people know what—the more people learn about it, the more they don't like it. And they want it to all be back room power plays, and lobbyists, and all this other stuff.

And people had tried, and organizations had tried, probably, by then for probably over ten years to do the behind-the-scenes thing [to try and reduce the amount of onscreen smoking in movies]. And it had just not worked.

And so I said, "I just want to just drag the whole thing out in the open and start a big argument about it, figuring that we're right. And if we can get enough people arguing, maybe the people on our side will win the argument."

And in a way, the conception I had of the problem then, which has changed, which is now a bit different. But then, it was like—because it all started out really focused on the creatives—it was like, we knew there were people [who made films] down there [in Hollywood] who agreed with us, just from conversations [with some of them].

And my goal was to start arguments at cocktail parties [in Hollywood] where people were saying, "Did you see what that son-of-a-bitch Glantz did?" "Yes." "Well, he's a complete son-of-a-bitch. He's against freedom. He's trying to destroy us."

[My hope was that we could inform and motivate some people inside the filmmaking community to respond,] "Well, he is kind of a son-of-a-bitch. But he is right." [I hoped] to change the social norms within the [motion picture] community by remote control. That was the basic idea.

"I want to do it with a paid advertising campaign because I had been involved in several campaigns using paid media, working through the Public Media Center.

Where and where [I would run the ads] I didn't know [Jonathan, "Jono"] Polansky at the time. He was the number two guy there, the creative director under Herb Gunther.

And I was just very impressed with what you could do with a well-focused, aggressive opinion-leader campaign, which is very different, than running a campaign directed at the general public. It's a whole, different way of doing things.

And [the RWJ interviewers] said "Well have you done any preliminary research, or focus group testing, or formative research, or blah-da-da?"

[I responded,] "No." [Laughter]

"Well, why do you think this will work?"

"Well, I don't know. But nothing else has, and let's throw something different."

"What's your metric for success?"

And I said, "Well, the campaign is funded for three years. And it takes about three years to make a movie. And so we won't know if we're successful during the three years because it's not a long enough time.

I finished the interview. Left the hotel. Got on a plane. Came back [to San Francisco]. Thought, "Well, that was kind of a wasted trip."

But they funded it. And that's what got the whole thing going.

The one really important point I forgot is when it came to writing the little one-paragraph proposal, given this really crappy history, I sat down and thought, "What would be fun to do, worth doing, if I don't get the money to do it, the world will continue to spinning, and will absolutely scare the shit out of these people?"

Just to really put something in front of them and dare them to fund it. There was a very high truculence quotient. [Laughter]

There are many other things I could have asked them for, probably around secondhand smoke or something. And that's probably what they expected. But it was, "What can I do that will absolutely just scare their pants off," and just dare them to do it. So, that's why I picked the movies. It's like, "Well, this would be fun."

The other thing I was thinking, because as one of the people who got clean indoor air going, when we started doing clean indoor air, that was completely crazy. The big health groups were not that engaged.

A lot of them were funding the predecessor organizations to what is now Americans for Nonsmokers Rights and similar groups around the country because they wanted to see the fight happen but they didn't want to put their names on it.

In the beginning, in California, there were maybe 10 people working on [smoking in the movies], if that—and there was no money. People were doing it in their spare time and with scrounged resources. Everybody thought we were crazy.

By the time [the smokefree movies campaign] rolled out in around 1999, 2000, the whole clean indoor air movement was up and rolling. And Americans for Nonsmokers Rights had gone from being a couple of volunteers to a [national] organization with an office and a staff.

And there were a lot of people doing research on secondhand smoke. We had a Surgeon General's report [on secondhand smoke]. It wasn't that I wasn't still involved and active, and doing research.

But I wasn't playing the same kind [of leadership role]—people would disagree with this—but from my perspective, I didn't see myself as playing that central a role anymore.

I was certainly involved. I was certainly making a lot of contributions. But it wasn't like in the early days when if somebody left, it created a giant hole and really jeopardized the whole enterprise.

So I was looking for something else to do. And I wanted—in addition to something that would scare the pants off Robert Wood Johnson—I wanted something that everybody thought was nuts. [Laughter]

I wanted to take on something that would be really hard. And I knew this was hard. And everybody thought it was nuts. To just see what I could do.

So, it was to give myself a challenge. To pick a really, really hard problem and say, "Can I move the mark on something where everybody thought it was crazy and impossible?"

So, a lot of what drove getting this thing going was this sort of individual truculence.

And so I got [the RWJ Innovators in Combatting Substance Abuse Award] in 2000, which I had totally not been expecting. Then I had to go back to them and ask them to delay giving it to me because I completely did not have my shit together.

Because I had talked to Public Media about—"What do you think? Would you—could you guys work with me?" [And they said,] "Yeah."

But we didn't really have any plan. We didn't have any strategy. I didn't know what I was going to ask for in terms of policy change. I didn't know anything. And now, all of a sudden, I've got to do it.

So, in a way, they [RWJ] kind of called my bluff. And so we delayed starting it for several months while got my act together about. Other than going out and raising a fuss, which is fun thing to do, you need to have something that, you have to have an actual, practical suggestion of what you want [the movie industry to do] because if you look back at all these earlier meetings, people sort of wanted less smoking in movies or more anti-smoking messages, or stuff like that. [But there weren't any specifics.]

It [doing something about smoking in movies] was kind of amorphous, which also made it easier for the studios and the creatives to ignore it. And so I really put a lot of thought into [defining] exactly [what specific changes] we want.

It had to be something that could be done as much as possible within established structures where the objective change from the status quo was as small as possible where you weren't going out and setting up new institutions, or new structures or things that would cost a lot of money to do and would require a lot of ongoing maintenance and a lot of ongoing money and a whole bureaucracy to keep it going because those things just aren't sustainable.

I had gotten to know a few people who were not super powerful but were connected in Hollywood. I talked to them a little bit. The other thing that was happening about the same time is the first of the Dartmouth research [by Madeline Dalton and Jim Sargent showing a quantitative link between the number of smoking images kids saw on screen in movies and their likelihood of starting to smoke] started getting published.

The Dartmouth stuff was an order of magnitude better scientifically than anything that had been done. So it put you on a much firmer scientific basis.

And then there was also some [experimental studies] that Connie Pechmann, who is at UC Irvine in the Business School had done where she had showed kids anti-smoking ads before movies and measured pro-tobacco attitudes before and after showing them the ads in movies or chunks of movies. [She found] that these anti-smoking ads seemed to blunt the [pro-smoking] effects of the movie [smoking] images.

And so I had a meeting. My office then was across the street and on the 13th floor. I had inherited the old Cardiovascular Research Institute Director's office. I had this great office with a big conference table and a nice view.

I asked Jim Sargent from Dartmouth to come out, who I knew a little bit. But Julia Carol, who was the head of Americans for Nonsmokers Rights at the time. She never graduated from college. But she's very organized, very grassroots-y, and incredible strategist, and a great judge of people.

Joe Therrien who was an account executive at Public Media, who I worked with because Public Media was organized like an advertising agency.

The other person was Curt Mekemson, who was at [the] American Lung Association [of Sacramento Emigrant Trails]. They had been doing their "Thumbs up, Thumbs Down" project [where high school kids went into theaters and recorded the amount of smoking in Top 10 box office movies every week] for some time.

[The question was:] "Okay. What can we do? What do we want?" And the thing we wanted from a sort of scientific public health point of view was to reduce exposure [to tobacco images on screen].

The ideal thing would be to get a ban because we want to get rid of Ebola. We don't want to just have less Ebola.

But I felt like a ban was A) impossible, and B) the creative freedom argument is a legitimate argument. I am a professor. I like being able to say what I think. And I don't like people telling me what I can and can't do.

But at the same time, there are rules, like the human subjects rules, for example, that you have to operate under. Most of the smoking kids get exposed to is in PG-13 movies. We knew that already.

I figured if we could drastically reduce the exposure, that would be good. And we had looked at the rating system. And there is the language in there about saying "fuck." [You can say "fuck" once in a nonsexual context and get a PG-13 rating. If you say it once in a sexual context or twice in a nonsexual context, you get an R.]

[So we recommended an R rating for smoking. That would keep it out of youth-rated films and so dramatically reduce youth exposure to onscreen smoking while still allowing the creatives to keep smoking as long as they were willing to swallow an R rating.] If you look at the policy that we're recommending and you compare it to at least what the [MPAA] rating system rule book said back in about 2001, it's word-for-word identical [to the rule for language]. We just changed "expletive" to "smoking." And the exception that's in there [our proposed rule] for real people who really smoked and if the movie clearly and unambiguously shows the dangers of smoking, there is a possibility for an exception on the "fuck" rule, too. And it exactly follows that.

And the reason we put the two exceptions in was in just the discussions and arguments that both I had in leading up to this meeting with these people, and also from being at all of these other meetings that I had gone to on and off over a period of many years you would hear about what about Winston Churchill.

How can you make a movie about Winston Churchill without a cigar? All right. We'll call it the Winston Churchill exception. We actually went back and looked and found all the movies made with Winston Churchill in them at one point. In about half of them, he had a cigar.

And then the other one was, "Oh, but you would keep us from educating kids about the evils of smoking. And it would be counterproductive." And blah, blah, blah.

And we also knew from the content analysis that Anna Hazan and I had done [Hazan AR, Lipton HL, Glantz SA. Popular films do not reflect current tobacco use. Am J Public Health. 1994 Jun;84(6):998-1000. doi: 10.2105/ajph.84.6.998. PMID: 8203700; PMCID: PMC1614937] that there were a few negative portrayals of smoking. But they're very rare. Very. It's less than a percent.

So, we thought, okay. We'll throw them that bone. That actually turned out to be strategically very good because those arguments do get brought up to this day. And we can say, "Oh, we have an exception for that."

And that just shuts it off. So, that's where the R rating came from.

And the anti-smoking ad thing came from Connie's work, where it was like, okay. If we're still going to allow some exposure, and we know some kids do see R-rated movies, then let's try at least blunt that effect. And then the no brands seemed like a no-brainer, that if you have to have the smoking, at least it should be generic.

And there was research that Jim Sergeant had done and this stuff that Curt Mekemson's group had done through Thumbs Up, Thumbs Down. And brand plug prevalence [brand placement] was very high, especially Marlboros.

The last thing was the certification of no pay-offs. That was based on the idea that we wanted to at least raise this issue of the pay-offs and try to make them radioactive. That was modeled on if you go to a movie where they have animals, they have a certification from this American Humane Society or something, which is a little bit of a captured organization. But theoretically, they have an independent certification that no animals were harmed.

[That is how we came up with the original four Smokefree Movies policy objectives

1. Rate new smoking movies "R"

Any future film that shows or implies tobacco should be given an adult rating—in the US, an R-rating. There are only two categorical exceptions: (a) when the depiction unambiguously reflects the dangers and consequences of tobacco use, or (b) the depiction exclusively represents the tobacco use of an actual person, as in a biographical drama or documentary.

2. Certify no payoffs

The credited producers should complete a legally-binding affidavit declaring that nobody associated with any future media production received any consideration or entered into any agreement related to tobacco depictions, and should post a certificate to this effect in the final credits.

3. Require strong anti-smoking ads

Studios and theaters should run a proven-effective, anti-smoking advertisement (not produced by a tobacco company) immediately before any media production with any tobacco presence, in any distribution channel, regardless of the work's age classification.

4. Stop identifying tobacco brands

Tobacco brand imagery should not appear in the foreground or background of any scene in any future media production, regardless of the work's age classification.]

One of the other theoretical bases or broader things we were trying to do by starting the fight was to raise awareness of the issue [of smoking in movies] broadly [within the Hollywood community].

Back then, when you were in these meetings with Hollywood, [it was clear that no one was taking the problem seriously. It was viewed as a matter of taste, not controlling exposure to a toxic stimulus.] There was a documentary about the issue that I think the American Lung Association made. Sean Penn is in it where they're doing the pros and cons of smoking in movies. People just didn't take the problem seriously.

Then it was animal rights and AIDS. Everybody was worried about animals. They're still worried about animals. And the AIDS epidemic was still in full bloom. And a lot of people in Hollywood are gay. And a lot of their friends were dying. And so there was a lot of awareness of AIDS.

So, when you brought up the smoking issue, it was like "blah." That's not real. That's silly. You know, there was that quote I showed you that I used at the beginning of the thing. [There was a paper] by Edith Balbach [that reported interviews with people in the business and showed that they just didn't take the issue seriously (Shields DL, Carol J, Balbach ED, McGee S. Hollywood on tobacco: how the entertainment industry understands tobacco portrayal. Tob Control. 1999 Winter;8(4):378-86. doi: 10.1136/tc.8.4.378. PMID: 10629243; PMCID: PMC1759741).]

The feeling was that if we could make [smoking in movies] enough of an issue [things would start to change].

It's like when you look at the fights over smokefree policies: typically what was happening and still happens in places where it's controversial, is you beat your head against the wall for a long period of time. It doesn't look like you're going to get anywhere. And then all of a sudden, you win unanimously or almost unanimously. And what happens is the forces of darkness and evil are dominating the discussion [when you start].

A lot of people [legislators] who would like to vote with you don't want to because they're getting leaned on and because they want campaign contributions and whatever. But once they realize you've got the votes, then they want to be on the right side.

So it's not at all uncommon to have people who had a week earlier, had been telling you that this is against America and going to destroy freedom and ruin the economy who end up voting for it [smokefree laws] because they know the public wants it.

They know that these claims of economic chaos and all that have been debunked. They're just being used as political window dressing. And they want to be on the right side.

It's not at all uncommon in politics when you look at hotly debated issues where they all of the sudden get this lopsided win. If you look at tobacco politics in the state legislature right now, we're kind of back to the bad old days where there's a committee in the assembly called Government Organization which kills all the tobacco bills because [the industry knows] if they got to the floor, they would pass overwhelmingly.

And so another part or a key element of what we were trying to do [on the movies] was make that happen. [To promote and inform] a remote controlled fight to where we knew there were people on our side.

We wanted to empower them. And we wanted to turn this into a legitimate issue. We have definitely succeeded at [that]. It took a long time. But we have definitely succeeded at that.

And so we're sitting around talking about it [at the original planning meeting in my office]. And Julia and Jim had both at one time or another been in on some of these discussions in Hollywood and were familiar with the general culture down there.

While we were talking about what the dynamics and pressure points are, Julia, who is a very salty person, slammed her fist down on the table and says, "You know, the real question is 'are

they whores or sluts?'" If they're getting paid for it [putting smoking onscreen], they're whores. And if they're giving it away for free, they're sluts.

Well, we didn't think we could put that in [and ad in] the *New York Times*. And that's where [the campaign slogan] "Corrupt or stupid?" came from. If they're doing it for money, they're corrupt. And if they're giving it away—billions of dollars of free marketing—they're stupid.

So, we had our slogan. We had the idea. We had the four policy goals. And then we just got off and running. That's how the whole thing started.

If you look at the ad campaign if you look at the early ads—and you should read every, single one of the ads and you should read them in order because if you read the ads and you see the arguments they're making and who they're focused on, you can see the evolution of the campaign over time. [All the ads are archived in the "Our ads" section of https://smokefreemovies.ucsf.edu archived at https://web.archive.org/web/20010501000000*/smokefreemovies.ucsf.edu.

In 2021 the site was updated to https;//smokefreemedia.ucsf.edu, which is archived at https://web.archive.org/web/20010501000000*/smokefreemedia.ucsf.edu. It also contains all the ads in the News/Smokefree Media ads section.]

The first ad is very wordy. It's very long. [The ad. which ran in *Variety* and the *New York* Times West Coast Edition in March, 2001, is available at https://web.archive.org/web/20010407004339/http://smokefreemovies.ucsf.edu/ourads/index.html.]

If you talking to people who do advertising directed at the general public, [they'll tell you it's way too many words. They like] lots of white space. Big [type] words. Not too many words. The words need to be not complicated.

And a lot of people were saying these ads are horrible. They're too gray.

You look at what you want in most ads is you want something that when you hold it up and look at it from across the room, you can tell what the point is. And these, you definitely couldn't do that. They're dense and nerdy.

But the point is, they were meant to educate [sophisticated] people [who were opinion leaders in the movie business]. They were meant to make an argument. And it was an argument that people hadn't heard before.

And it took a lot of words to do that. If you look at the ads, for several years, they're all very wordy. They're very nerdy. But these things are really directed at a very [specific and sophisticated insider audience]. It's what they call in marketing "narrowcasting." You've heard of broadcasting. Narrowcasting is the opposite of broadcasting. It's when you put an ad out there that goes into the general media but it has an [important] audience that's very small.

If you watch the Sunday morning [news] talk shows, there are ads for Boeing or ads for farms, for Archer Daniels Midland.

But these things about Boeing or Archer Daniels Midland and corn, 99.9 percent of the people watching the Sunday morning talk shows could give a shit. But a lot of people from Congress, a lot of people—upper-level people in the bureaucracy, the administration—they watch that.

And those ads are a way of reaching them. So, they're talking to a very, very small number of people. The ads are also a way of projecting power.

If you're out there in the media in a full-page ad, not any old Tom, Dick, and Harry can't do that. It takes money to do it. It takes a certain amount of organization to do it.

What it is saying to the people you're talking to is, "You have to take us seriously."

Around the time that the campaign started, Jono [who actually made the ads decided to stop being] Herb's number two guy [at Public Media Center]. Jono just said, "I'm going to go out on my own." And they he created Onbeyond which he runs out of his house.

And Jono said to me—this is 2001—he said, "Well the big, new thing—it used to be you just ran an ad. But now you have to have a web site. Because the big, new thing in advertising is you run an ad to drive people to a web site where you can put more things."

I said, "I don't have any money for a web site. I [just] have enough money for the ads. That's the entire budget. I can't hire anybody to do a web site. I just can't do it."

Then, I happened to be over at a book store. My PhD is in engineering. I know how to program computers. I ran a computer facility here [at UCSF] for a while. I've designed commercial statistical software [SigmaStat]. [I picked up a] book on how to do a web site [using a canned package].

So, I just started playing with it and thinking, "Well, Jono wants me to make a web site. We can't [afford to pay someone else to] make a web site." It was like a game.

In fact, this big statistical package I ended up designing [SigmaStat] started out the same way. There was a program called Turbo Pascal [which was one of the first systems that let you write and] debug and then run it [a program] all on the fly. A friend was telling me how cool Turbo Pascal was. So, I got it. I said, "Well, now I need to program something." So, I started programming a statistical package, which turned into this whole, huge package.)

I put a web site together that I was pretty proud of: it was pretty well organized and had good content. I was so proud of myself.

I showed it to Polansky. He looked at it and said, "This is a really impressive, Grade-A amateur web site." And he said, "We need to look professional because it's all part of kind of projecting power and not just looking like a kind of kind of random person."

I said, "Jono I don't have any money to hire [a web developer]," because then paying somebody to develop a web site costs gobs of money. The Internet bubble was still bubbling along, so it was very expensive. I just can't do it.

I can't remember whether it was Jono or Joe, but they reached out to a web site development company here in San Francisco called Stone Ground run by a guy named John Goggin. Stone Ground had some pretty big accounts. They did work for the University, the president's office, and some of the campuses, a lot of banks.

Stone Ground did a certain amount of pro bono public interest work. And Jono or Joe convinced them to take us on as a pro bono client.

Their normal development process takes months. I said, "We can't wait months. We've got to get going." We opened a campaign with the Oscars in [March] 2001.

They put a whole team on this. And in two weeks, took my nice, amateur web site and turned it into the original Smokefree Movies web site. They went through the whole thing where they developed design options and alternatives, and different structures. It was amazing. It took two or three weeks.

And then when we were—launched the ad campaign—we had a web site. And I have to admit, being kind of skeptical of the value, but it ended up tremendously important because that's how a lot of people found us, including a bunch of high school students in New York with Reality Check [a tobacco control program run by the New York State Department of Health]. They brought this whole, huge effort through the New York State Health Department into the conversation, which has been very, very important.

There's actually one other thing [before we strop for today]. Another big problem we had at the same time was [that there were some ongoing insider efforts still going on at the same time.]

[One was Melissa Havard on behalf of the CDC.] A lot of these people who are kind of around the edges in Hollywood playing these various intermediary all want to be players. Their whole kind of stock and trade is developing relationships and getting access that they can then sell to people. The one thing you want or that you absolutely need if you're playing that game is for people to answer your phone call.

You don't get people to answer your phone call when they're really mad at you. And so these people were out there. Meanwhile, we're out there trying to look as mean and threatening as possible and saying, "You just have to do this. And if you don't, you're killing kids, and you're really bad."

And then you have people like Melissa, and there was a—somebody else who I can't remember right now—out there saying "This is all crazy. They don't know what they're talking about. We're making lots of progress working on the inside [and we don't want Stan messing it up]." It was really complicating us getting what we were doing.

So we had to push those people out of the way. That has happened a couple of times. Another incident, which was some years later, was a guy named Jay Winston at Harvard. Which we actually ended up turning to our advantage in some very important ways. But we really had to get Melissa out of the way.

And that meant working with the CDC and convincing them that it was a bad idea to be doing what she was doing.

There was a certain amount of getting those people either neutralized or out of the way. I remember being invited down to an event in L.A. that somebody had where—I think it was involving high school students who cared about this.

They had a panel. And we were kind of on opposite ends of this table. And I was up there saying "This is where have to do something. And we've got to change."

And then she gets up there and talks about "Oh, you just don't understand," and "these people are doing the right thing and you're just pissing them off." And so that was one of the early challenges we had in terms of shoving those people out of the way.

And it has re-emerged from time to time. The biggest threat was the Jay Winston thing. And in the current time, without going through the whole big, long saga about getting the Surgeon General's Office involved, getting them involved is very powerful.

One of the problems with this, if everybody who comes into this [smoking in the movies] new thinks the same things. It's like, "Oh, well, we need to work with them [Hollywood]. And they're our friends. And if we're nice to them, we can get them to do what we want. And we really need to focus on the actors."

Actors probably have very little power in all this. It's the directors, and the producers, and the studios that have the power. And the basic rule is if you're an A-list actor, which maybe there's like 10 of them, the basic criteria I've been told by the director is if the actor can get the director fired, then they can do whatever they want.

And if they can't, they do what they're told. The way it was described to me by-by one of the directors is "When you're on a movie set, it's like having a huge bonfire that you're throwing money into." [Laughter]

Time is money. And somebody has to be in charge. That's why they spend so much time with storyboards, and planning, and all of that. When they're out there shooting, there's a lot of people involved.

They might be on location or they're in a big studio set. And they've got special effects guys and all this other stuff. They need to be efficient and then they have to shoot everything 300 times anyway to get it the way they want.

So the director is in charge. And the people do what they're told to do. That's the way it has to be. But again, [sometimes] if you have some—you know, you see—you read these stories in the [sometimes] you see there's some actor who is a cokehead. And they blow off the director.

Well, if they're a big enough name, they can get away with that. But that's a very, very, very short list. So in dealing with the people in the Surgeon General's Office, we had to go through a

whole educational experience with them to keep them from wanting to get in a time machine and go back and do what people were doing in the '80s and the '90s because that's everybody's—

Everybody's first impulse is, "Well, let's call them up and see what we can work out." And it's like, "No. Please don't." You know, we are in the situation that's going on right now, it took months and months and months and months of talking to these people to convince them not to do that.

The problem is, when you're dealing the government, is there's a whole bunch of layers. So, if we can get the guy who knows what he's talking about to think that, he then has to convince five people above him. So, anyway. That's a good kind of place to pause.

SFM-Stewart-Glantz-2015-06-18-Audio

Jono was right because the website became the more important presence of the campaign than the ads.

[Another thing about the website that was very important was that we included data that the Thumbs Up Thumbs Down kids collected every week on how much smoking (and, occasionally, other tobacco use) there was in the top movies in the theaters every week. In fact, when we updated the website, we moved that information to the home page and added lists of the smokiest movies, smokiest directors, producers, actors and others in a way to hold them accountable. As the website evolved, in cooperation with the American Lung Association of Sacramento Emigrant Trails, we made the full TUTD dataset available and searchable by anyone who was interested. These datasets became the basis for several publications, and were used in preparing at least one Surgeon General reports. These data were crucial to maintaining pressure on the companies and creative community.]

In terms of the industry, the ads were a way to project power and to educate people, and to raise the issue [with the people who made movies].

But the website became a resource for the media, to some extent for the general public. The important thing that happened—and probably the single most important thing that happened because of the website—was that I got contacted by some high school students in New York who were working in a program called Reality Check.

And if you look on the *120,000 Lives* DVD [that Marty Otanez, who was then a postdoc working with me, produced on the issue of smoking in movies; available at https://www.youtube.com/watch?v=SjZo0qsl43k. The full DVD is deposited in the Stanton Glantz papers with UCSF Archives and Special Collections] one of the extras is a Reality Check promo [produced by the New York State Department of Health]. The New York State Department of Health Tobacco Control program had created a youth empowerment network.

That was something that was pioneered in Florida after they settled their lawsuit against the tobacco companies and created the Florida Pilot [Tobacco Control] Program under Lawton Chiles, the Democratic governor. An element of [the Florida Pilot Program] was something called SWAT, which was high school students who were organized to get out, and raise hell about tobacco. Reality Check was modeled on that. It was developed by the New York State Health Department. The woman who was running the [New York] program was a woman named Ursula Bauer, who [went on to become] a bigshot at the CDC [Director of the National Center for Chronic Disease Prevention and Health Promotion, reporting directly to CDC Director Tom Frieden].

Ursula was an epidemiologist who came from Florida, including working on the early evaluation of it [the Florida Pilot Program].

[Ursula was the keynote speaker at the 2012 "It's About a Billion Lives" symposium the UCSF CTCRE puts on every year (available for watching at https://lecture.ucsf.edu/ETS/Play/7a34f97f01ae4bb8acf8ec9b43693a581d). Ursula talks a little

bit about the movies in there. And Ursula is an amazing person. She's kind of a small, soft-spoken woman. And my image of her is there's this sort of small, soft-spoken woman who's really a Tyrannosaurus rex. And she's very aggressive, and very strategic. I'm pretty sure she got Reality Check started in New York.

At the time, [Reality Check] was run by a staff person named Alison Rhodes-Devey. These kids were high school students to get involved in doing something about the tobacco issue, including stuff about retail outlets, and some other things.

One of them stumbled on to the website, and they decided that they wanted to work on the movie issue. And so, I got this call from them saying "Would you mind if we worked on the issue?" And it was not something I'd ever planned on at all, and I was like, "Yeah, sure. Why not?"

That was probably 10 years ago, and they're still doing it. And the it became a very major element of the program there. It's a great issue for kids because it's fun, and it's interesting. And it really shows them the kind of unpleasant underbelly of the whole problem. They did a lot of free media around this, a lot of events, and they really raised public consciousness in New York State over the issue.

The STARS project was something that the State of California [Department of Health Tobacco Control Section] funded to engage Hollywood on the issue. It reflected the thinking at the time [among public health advocates]. It was sort of the-the beginning of people saying, "Well, couldn't you please be socially responsible, and do something?" [STARS supported the Lung Association documentary on smoking in movies and an exhibit on the subject at a film museum on the issue, among other things. STARS also sponsored some of the meetings in Hollywood that I attended before coming up with the idea for Smokefree Movies. In some ways, Smokefree Movies was a reaction to the failure of STARS' softer approach.] This is before the Reality Check stuff I was talking about.

So I just started working with [Reality Check]. And they if you look at the polling that was done in New York the level of public support for an R rating [for onscreen smoking] went from around 40 percent to around 70 percent in a couple of years just because of having the issue out there.

It was a validation of the original idea of the whole campaign that the public is on our side, and if we make enough noise they'll become mobilized. They [Reality Check teens] did raise quite a lot of hell, and they picketed theaters, and they did all kinds of fun, and interesting things.

They had events. They generated a huge amount of media attention, and they continue to. The Selfie campaign which is on the [Smokefree Movie] website now. The Rate Smoking R Selfie campaign came out of Reality Check.

Some of them are now probably [now in their 20s] and still active in the tobacco issue in various ways.

One of the things that they did was they had these things called Fame & Shame Awards. If you look on the old [Smokefree Movies] website right at the top of the home page there's a guide

[called *Screen Out!*] on how to be an advocate around this issue. [For example, see https://web.archive.org/web/20090131144018/http://smokefreemovies.ucsf.edu/actnow/index.html.]

You can just download it; it was a guide that we put together for community-based, and youth advocate groups all over the world on of how to do it [based on] the Reality Check model. The old website has a whole chunk in there in the Resources, which is the Reality Check training materials, and briefing materials, and stuff the kids produced. [All the material, including the *120,000 Lives* DVD and other videos is archived at https://web.archive.org/web/20150114052256/http://smokefreemovies.ucsf.edu/actnow/organizing_tools.html.]

It's not so much on the new site [that was launched in April 2015, archived at https://web.archive.org/web/20150406054227/http://smokefreemovies.ucsf.edu/] because it's a little bit dated.

One of the things they [Reality Check] had were the Fame & Shame Awards. It was like a parody of the Oscars, and they did it around the time of the Oscars.

I thought the Awards as a cross between a senior prom [and an anti-tobacco workshop]. The State Health Department funded a whole bunch of it. I think there were eight of them around the state of New York.

They brought all of these kids together, kind of, and they would do these sort of phony awards ceremonies where they gave like awards for like the smokiest movie, and the smokiest actor, and the biggest badass, and things like that.

They invited me to go to the first of these in Albany, New York in February.

Now, Albany, New York in February is not the height of the tourist season. I had just spent too much time on airplanes, and I didn't really want to go. And Karen Williams [my administrator at the time] said, "These kids have been like helping you for however long. A year or two. And how can you say, 'no' to them?"

So I go. I went back there, and it was probably the most amazing event I've ever been at. [There were] 800 totally turned on high school students all dressed up. They had it in a fancy hotel ballroom. They came in limos, some of them.

I'm going around talking to the kids [and they told me they] had run a letter-writing campaign directed at Julia Roberts, Brad Pitt, the Directors Guild, the Motion Picture Association of America. They had written 200,000 letters and postcards.

I'm going around asking, "What happened? What happened? What did they say? What did they say?" And it's like, "Nothing, nothing, nothing. Nobody answered. They're completely ignoring us." And I got to this girl, and she said, "Julia Roberts sent it back threatening to sue us." I just couldn't believe that. Julia Roberts is a multi-millionaire because of these kids.

I felt she didn't have to listen to them. She didn't have to agree to them, but she at least shouldn't be rude. I just couldn't believe it, and I said, "I want that envelope because I'm going to turn it in to a full-page ad." And I called up Polansky, and I said, "We're doing an ad about an envelope," and he said, "You're completely out of your mind."

[The ads were] usually like attacking a movie, or a person. Not an envelope.

But I just said, "This is just outrageous." And so, we did a full-page ad.

Yeah, and so, we ran the ad in *Variety* [on May 7, 2003. Add archived at https://web.archive.org/web/20030602043956/http://www.smokefreemovies.ucsf.edu/ourads/index.html], which at that time was the only one of the trade pubs who would publish us. And then, Ursula called me up, or somebody who worked for Ursula, and said, "Do you mind if we run it in the *New York Times*?"

And I was like, "No." I didn't have the money to run it in the *New York Times*. And so we redid the ad as—in a slightly different form. The one that's framed on the wall [outside my office], which actually has a picture of the kids in it, too, down at the bottom.

And when I was at the event in Albany, when I got up at the end and had a chance to speak, I said "I'm just outraged by this Julia Roberts threatening [you]." Even though it wasn't her personally. It was one of her minions threatening to sue you. And I said, "I'm going to turn it in to an ad." And they all went, "Hooray!" They were all excited.

Then we ran the ad. Everybody in New York was very excited. The Health Department wanted to run it in the *Times*. I said, "Sure." We redid the ad, and when you run in the newspaper there's what's called a standby rate. It's like going standby on the airplane.

You pay a lot less money [for a standby placement than a regularly schedules placement], but they won't guarantee the placement [date]. What they'll guarantee is that it'll run during a certain week. And the time we want to run in the newspaper is Monday, Tuesday, or Wednesday, okay? Thursday, maybe. Friday, definitely not. That's why whenever politicians are going to do something bad they always release it on Friday afternoon because it falls in to the weekend news hole.

So the ad was scheduled to run on Monday, and then, it got bumped because of something. And then, it got bumped to Tuesday, and then, it got bumped to Wednesday. And then, on Wednesday they were going to bump it to Thursday.

Then the *Times* called up, and said, "We feel really bad. You know, we don't usually have to bump things this much. And if you want, even though we're contractually obliged to run the ad this week we'll guarantee you a Monday placement if you want next week, if you want."

But it happened the last of the Reality Check Fame & Shame Awards was being held at Madison Square Garden in New York City that Friday. And so, we said, "No. Well, could you, will you guarantee us a Friday placement?" Which they actually had to do because of the contract, and they said, "Okay, sure."

So the ad ran the day of this big event at Madison Square Garden [May 23, 2003], and they had me come back for that, too. And so, I got up at the end, and I said, "I told the kids—" and I felt like [General Douglas] MacArthur [returning to the Philippines]: "I told the kids in Albany that we would run a full-page ad, and here it is in today's *New York Times*." And they all went crazy. [Both versions of the ad are archived at https://web.archive.org/web/20030602043956/http://www.smokefreemovies.ucsf.edu/ourads/index.html.]

[Reality Check kids] really pushed the issue forward. They've picketed the big studios, or their corporate headquarters which are all in New York. (If you look on the website there's pictures of some of this.) There's a lot of it on the old website. They generated [a huge amount of free media and public engagement]; the New York Health Department has been a tremendously important player in all of this.

They bought full-page ads in the *New York Times*, and the *Washington Post*. I mean, in the *Wall Street Journal* pushing the four [Smokefree Movies policy] goals, pointing fingers at the studios which is just unheard of for a State Health Department to be doing something like that.

My wife and I were in New York just on vacation—and this picture is on the website—we walked out of the subway, and there was a Smokefree Movies ad. Jono did for them, but it was a cigarette being crushed out, and it said, "They don't belong in PG-13 movies, either." And it was on the subway stops, or the subways.

As you come out of the subway there are those ads. They're all over that. They were on garbage cans. They were on billboards. They were on buses, taxis. You could not walk around Central Park South, which is where all of these [media] companies are located, for about two months without seeing these ads.

I think that—combined with the holding events at Central Park South right in front of the Time Warner Building and doing marches to the other ones—that combined with the fact that the State Health Department was out there in such an official way had to have put a gigantic pressure on the companies.

That became the model for activities that are they originally took on the movie campaign figuring they would work on it for six months 10 years ago, and they're still working on it. And the Reality Check program has become the model for a lot of other youth advocacy programs around the country.

Now, none of them [the other youth programs] have had the staying power that Reality Check has, but it, like there was the things were going in Indiana, and Minnesota, and, several other states all based on Reality Check. And then, they spilled over in to Canada, to Ontario, and there's been a lot of activity in Ontario around this issue, which is actually heating up again.

I was getting asked to go to Ontario, and meet with the kids, which I told them I really shouldn't get on any more airplanes, but I'll probably do it. And the other—so that's really become the kind of grass roots presence of the campaign all over the country.

And another health department that got very heavily involved under Jonathan Fielding, who was the head of the Los Angeles County Health Department. They held many events. Did mobile billboards. Did some of that stuff is on the—if you look in the DVD extras on the *120,000 Lives*.

For several years held press conferences right before the Oscars. They [the LA Heath Department] had mobile billboards that we designed for them that they drove around, and parked in front of the studios. They had youth events, and generated a lot of press in L.A.

Fielding retired as Health Director in the last year, but now he's on the faculty at UCLA School of Public Health. The interesting thing about Fielding is he's got a reputation of being very cautious. I remember talking to him one time, and he I said, "You know, Jonathan, you have a reputation of being a little bit cautious, and you're really hanging it all out here on the movie issue." And he said, "Well the data is what the data is, and we just have to deal with it." So it's a very principled position.

One of the things that's made this an interesting, and gratifying issue to work on in addition to the [unintelligible] is that there are a whole bunch of people who really have nothing personally to gain out of any of this who've invested quite a lot of effort in it, and really moved the issue forward through the through actions that they've taken in an official way.

I don't know the total amount of resources that has gone in to this campaign because my little shoestring effort here has generated all of this other activity all over the world. It's very much modeled on the work we've done on clean indoor air in the early days.

We're not trying to control it, we're just trying to push it forward. And keep people, and organizations saying to people, "We're not trying to talk people in to doing anything," because my experience has been that, especially when you're talking about big organizations, or bureaucracies it's very hard to move them from the outside.

But when there are people on the inside who wanted to do something we work with them, and the goal, the question is, "What is it that you can do that you're comfortable with that will advance the broader mission?"

And equally important, [the partner organizations] not do anything stupid that would set us back because sometimes your friends can end up being your biggest enemies not be out of malignancy, but just out of doing something wrong.

For example, everybody when they get in to this issue wants to make all the same mistakes everybody else has made. "Let's go talk to the studios. Let's go work with them. Let's worry about creativity. Let's try to find an actor who will be our spokesman. Let's talk about glamorization rather than just getting it [the onscreen smoking] out."

Because even if the studios agree not to glamorize smoking, what does that mean? It's not [a standard you can make] operational. What does glamor mean? Again, one of the reasons we came up with this very strict no smoking except if it's an actual figure who actually smoked, or clearly, and unambiguously shows the dangers is because anything with less than of bright line than that is easily manipulated. You can get in a long artistic argument over whether something,

or another is glamorous, or not. It's an undefinable term. [And that makes compliance unmeasurable. In addition, the science shows that it is the amount of smoking—not glamorization—that best predicts behavioral effects of exposure to onscreen smoking.]

The good side of working with a lot of different groups, and as you're trying to generate generalized chaos all sort of pointed in [the same] general direction, you do have to spend a moderate amount of time running around, watching what people [on your side] are saying, and making sure they don't say, or do anything counterproductive.

Looking at the sort of evolution of the State Health Department efforts, the youth movements are a good idea. Indiana is a good example. Carla Sneegas ran the Indiana State Tobacco program for many years, and is now at the CDC in charge of [CDC relations with] all the state programs.

Indiana was very heavily involved in this issue when she was running their program. It got whacked by the Republican governor. But that was one really important thing that Reality Check generated, and which is still reverberating out there.

The other really important thing that they did is if you look at the ads before and after the envelope ad, the ads changed. The original focus of the ad campaign was very much like what everybody else was doing. It was focused on the creatives. If you look at who we're beating up, it's [people like] Julia Roberts and Brad Pitt because the kids in Reality Check had picked them out as two of the bad people, and we were trying to support Reality Check.

The you'll see a lot focused on the directors, and the reason for that was there were some people in the Directors Guild who were trying to move the issue forward inside the Director's Guild. There's a couple of very inside baseball ads about directors [we ran to support those efforts].

What was going on is there was an effort in the Director's Guild to get them on record on our side. They came very close to succeeding. But then, at the meeting some important—I can never find out who—but some very important director showed up, and put the kibosh on it. Maybe somebody like Martin Scorsese, or Steven Spielberg came in.

And the speech, as it was relayed to me, was, "Well my mother died of lung cancer, but—" And whenever anybody says, "They're my grandmother," or something, when people say that that's the standard tobacco script. So you know somebody had gotten to them. And there were other people in the community like the Screen Actors Guild very early on was actively engaged [on our side] in this issue.

There was TV sitcom, on TV in like maybe the 70s called *One Day at a Time*. It was a breakthrough series about a divorced woman with two teenaged daughters.

And it was about how they made their way through life. It was a very popular. It was on TV for many years. The guy who played the boyfriend of one of the teenage girls was Richard Masur, who grew up to become president of the Screen Actors Guild.

He was very interested in this issue, and wanted to do something about it. And there were a lot of discussions with the Screen Actors Guild, and they actually hosted a public hearing held by the

California State Senate at the Screen Actors Guild auditorium in L.A., which I went down to to testify.

The Tobacco Institute, which was the tobacco industry's lobbying arm, had an office in L.A. somewhere. And the one of the people at that hearing told me that the representative of some important Hollywood thing [was seen having dinner with a Tobacco Industry lobbyist about the hearing the night before.], I can't remember what [organization] it was. Whether it was the Motion Picture Association, or the Director's, or something had been seen having dinner with the chief lobbyist for the Tobacco Institute that was based down there the night before this hearing. They were talking about what to say.

So there has always been a fair amount of people inside the L.A. film community [who] were sympathetic. And so, the original idea of the campaign, as I [said before] was to try to start an argument inside the community, and hope that the people on our side would end up saying something and change the conversation.

And if you look at the ads up until the envelope ad that is the audience. We were trying to put the issue on the table, tell people what we wanted, and hope an argument among the creatives would lead to social norm change just like clean indoor air laws have, and change the reality.

And what the Julia Roberts incident said to me, and this is something Jono had been probably nagging me about before that, is that that's not where the power lies. That's not where the decisions are made. The creatives are basically a bunch of egotistical jerks, and that we should start talking to the grown-ups. And that is the studios.

By the studios I mean the studio management. And then, very shortly thereafter, we shifted to the media companies themselves. And it was when we did that that things started to move. It was when we—the first of the ads we ran attacking the media companies is also framed, and up on the wall out there [in the hall outside my office]. [The ad, which ran on May 21, 2004, highlighted top management at Sony, Disney, and Time Warner. It is archived at https://web.archive.org/web/20140911213715/http://smokefreemovies.ucsf.edu//ourads/ad_sfm21_nyt.html]

When these CEOs, chairmen of boards who are responsible for these giant enterprises where the movies are one little piece of it started seeing their names in the newspaper in very unflattering terms it got their attention.

[These high level corporate managers were] unlike the Hollywood community, which had placed very high value on fighting off the outside bad guy bluenoses who were trying to not let them do what they want. Plus, the tobacco companies had spent years getting to be their pals, and giving them stuff, and really embedding themselves in the whole culture. [See Mekemson C, Glantz SA. How the tobacco industry built its relationship with Hollywood. Tob Control. 2002 Mar;11 Suppl 1(Suppl 1):I81-91. doi: 10.1136/tc.11.suppl_1.i81. PMID: 11893818; PMCID: PMC1766059 and Lum KL, Polansky JR, Jackler RK, Glantz SA. Signed, sealed and delivered: "big tobacco" in Hollywood, 1927-1951. Tob Control. 2008 Oct;17(5):313-23. Doi: 10.1136/tc.2008.025445. Epub 2008 Sep 25. PMID: 18818225; PMCID: PMC2602591.] If you're sitting there as the CEO of Time Warner it's, "Why am I getting my corporation in trouble

with potentially with Congress, with AGs, with the public? And for what? For what? Because some jerk wants to smoke a cigarette, or is cutting some under the table deal with a tobacco company?"

Once we kind of elevated it to that level that's when things started to change. The first of the studios to adopt a policy was Time Warner [in 2005]. The whole history of these policies is on the website. [For example, as of December 2020, see https://web.archive.org/web/20201205054858/http://smokefreemovies.ucsf.edu/whos-accountable/company-policies.] It wasn't bulletproof. It had loopholes, but it was the first real acknowledgment of a problem, and formal corporate response to it.

Everybody was very excited about it. The Attorneys General who had been engaged [were excited]. Everybody in the [American] Legacy Foundation, which was the first of the big health groups to get onboard with this because of [CEO] Cheryl Healton and the relationship I had with her, and the fact that we're fellow travelers.

Everybody was hot to thank Time Warner, and make a big public deal out of it. There were several conversations with high-level people in Time Warner. I was in a little bit of it. Other people talked to them. And they came back and said, "Please don't thank us." They said, "Look, we're doing it. We're doing what you want. We just don't want a lot of publicity around it. And we don't want to be given plaques, and we don't want to be thanked at events. Leave us alone. We're doing what you want."'

I think it's because they're living in this culture where they're really afraid people [who make the films] will get mad at them for doing this [i.e., adopting a policy to discourage onscreen smoking]. [They were concerned that the creatives would see it as] censorship. That it's against the First Amendment. That it's like the blacklist. That it's that it's against freedom, and creativity, and, "How dare you side with people outside of our little tribe?"

They're worried about pissing off important actors. And more important, important directors who can make them a lot of money. So it's always been, "We're doing it, but don't thank us. We don't want you to." And that's been one of the real problems because nobody [in the motion picture business] wants to be publicly seen as leading the issue because they're all afraid of being accused of being bluenoses.

I had conversations with the senior vice president who was in charge of implementing the Time Warner policy. I went down there [to Burbank] at one point, and met her. She went through with a couple of her colleagues war stories about they reviewed scripts. They reviewed storyboards. They reviewed the dailies, which is the shooting every day. They were involved in the editing.

She told me about example where they got the smoking removed digitally in the final cut, or got rid of most of it. And it's just trench warfare with the directors who just didn't want to do it [keep smoking out of their films].

And I remember saying to her, "Look, why don't you just have a blanket policy saying no smoking in our youth-rated movies except for the two exceptions? Wouldn't that be easier to

implement than this trench warfare that you're engaged in where you're arguing over every little thing?"

I said, "It's kind of like trying to make bars smoke-free by going in, and arguing with every drunk." And she told me—and I've talked to several people down there in different companies, all who pretty much said the same thing: "We are really afraid of pissing off some director who has a great project who will take it somewhere else."

It's very similar to the concerns that people have [about smokefree laws]. In the early days of smoke-free restaurants, and smoke-free bars where you'd go to restaurant owners, and bar owners, and say, "Look most people are nonsmokers. You're spending a lot of money on like fire insurance, and painting more often than you need to. And you have sicker employees. Why don't you just get rid of the smoking?"

[They would respond,] "Well, yeah, that makes sense, but I'm just afraid. I've heard all this noise from the tobacco—"They didn't say from the tobacco companies, but the tobacco companies were paying off the restaurant associations to spread this propaganda that they'd all go broke. "Yeah, yeah, we think you're probably right, but we're still worried, and we don't want to do it unless everybody does it."

I remember saying, "Yeah, I understand, but you're the ones with the checkbooks." It's very hard to get a movie greenlighted, to get the money to make a movie. And I said, "Do you mean to tell me you think a director would walk away from a deal to make a movie they want to make over this [keeping smoking on screen]?"

And [the response was,] "Well you're right, you're right, you're right, but we're still worried about it because we're really afraid that one of these really big-name directors will have some great blockbuster idea, and they'll get mad at us, and go somewhere else, and then, they'll make that other studio a lot of money, and I'll get in trouble."

Now, that's completely disjoined from the reality which is everybody's grateful if they find somebody who will support their film. If you watch the Oscars and listen to the acceptance speeches they always are saying, they're always thanking people for believing in them, and giving them a chance, and, "I had this weird idea." Nobody is saying, "Oh, well, I'm glad that this company won the bidding war."

It comes down to social norms and expectations, and that's part of what we've been trying to change in the campaign. I've had a chance to meet with the people whose jobs were implementing Warner's policy, Disney's policy, and Universal's policy, which were the first three to do it.

All three of them told me these were decisions made at very high levels. It wasn't from the bottom up. It was from the top down, and [top management] just said, "Why are we doing this? I want this to stop."

None of the policies were completely bulletproof because they always had these artistic exception language in them which was there. [Disney closed that loophole later.] It created a

very large loophole, but it was there because of this fear that they would lose projects. And my read of this, and this is what Polansky will tell you, too is these guys want to be forced to change.

They want to be able to say to the Martin Scorseses and the Steven Spielbergs, and the other directors who have really bad records on [onscreen smoking], "We didn't have any choice. We had to do this. That the political cost to us, the potential other economic or legal risk just got to the point where we had to, and it's the right thing to do. And so, stop whining, and we'll give you lots of money to make the movie you want."

That shift in focus probably would have happened anyway, but the Julia Roberts incident played a really important role in [us] just saying, "Okay, [we need to shift the focus to management]." We still have ads that are directed at the creatives occasionally. But the focus of the campaign really did shift [to studio and corporate decision makers].

There was a lot of effort since then in working with the AGs, and working with people in the CDC, and the government, and working, with the other health groups, and medical groups that we've been working with to try to keep them focused on the corporate CEOs, and the studio heads, and not the creatives.

[As I alluded to before, the state Attorneys General have also been important contributors to the Smokefree Movies effort.]

If you go back to the mid-90s when there was there were all the state lawsuits against the tobacco companies and the initial cases were filed by—and Mississippi was the first to file, and then the other early filers. And I can't remember the order. It was Minnesota, Florida, West Virginia, Massachusetts, and Washington State. Those were the early filers.

I don't know what particular thing got the AGs interested in the movies. It may have been that letter from Sylvester Stallone [in which he promised to smoke Brown and Williamson cigarettes in five movies for $500,000], which is out on the wall. [The letter is at https://www.industrydocuments.ucsf.edu/tobacco/docs/#id=gybh0097. A follow-up detailing implementation is at https://www.industrydocuments.ucsf.edu/tobacco/docs/#id=slbh0097.]

Which I was in the original box of documents that I got, and there was other stuff in the original box of documents I got on the movies. Not a lot, [it's in] the *Cigarette Papers* book. That may have been what got them interested. I don't know.

But as the cases moved forward, the whole legal system is designed to settle lawsuits. It will go to a verdict but, a verdict is usually a winner take all, loser gets nothing. And so, the whole way litigation is structured it's to say to the parties, "Why don't you guys just work this out?" And so, most lawsuits settle.

And that's by design. The first of the [state] lawsuits to go to trial was the Minnesota or the Mississippi case. And if you watch the movie, *The Insider*, that's about the Mississippi case. It's about Jeff Wigand, but he was a key witness in the Mississippi case, and you'll see, Mike Moore who was the Attorney General of Mississippi playing himself in the movie.

When the Mississippi case it settled for money. What they got was they got an amount of, they got basically an amount of money out of the tobacco companies that would pretty much reimburse the state for their smoking-induced Medicaid expenses.

Medicaid. Medicaid is the state program. Medicare is the Federal program.

And that's what the states were suing for was that, plus injunctive relief to get [the cigarette company defendants] to stop behaving badly in terms of marketing.

When you have a whole bunch of these large lawsuits moving forward at the same time, the courts are pressing you to settle. But one of the things that sort of holds people back from settling is, "Well, God, I'm suing, what if I settle, and then, that guy over there settles [later], and gets a better deal? Then, I'll look like a jerk."

And so, a very common provision to include in these cases is something called a "most favored nation clause." What a most favored nation clause says is that if we settle our case, and then one of the other attorney generals settles their case and gets better terms, those terms apply retroactively to us.

Including most favored nation language was pretty routine in these things, but the fact that the cigarette companies went along with it in Mississippi was a huge strategic blunder because the next case to settle, I believe, was Florida.

There was a huge amount of pressure on everybody to settle because no company wanted a verdict against them, and no attorney general wanted to be the first one to lose.

And so, the Florida case, which I'm pretty sure was the second one, got as much money as Mississippi did. But it added in money for an anti-smoking program.

Which became the Florida Pilot Project. And that's where the original Truth Campaign came from.

And the SWAT team, I mentioned earlier. And then, because of that, it applied to Mississippi so Mississippi got an anti-smoking campaign, and a bunch of other stuff. One of the mistakes that they [the Florida AG] made in Florida was they agreed to a clause which was called the "vilification clause" where Florida agreed not to run any ads attacking ["vilifying"] the tobacco companies.

Because the California campaign was built around that. The industry knew [these ads worked]. They knew they hated it. And they got Florida to agree not to do it. But they ran the most incredible campaign where they attacked everybody else [who was supporting the tobacco companies]: their ad agencies, the scientists who worked for them.

But it [the Florida Pilot Program and the Truth ads] was a brilliant, brilliant campaign. And I'm pretty sure that's where Ursula cut her teeth. Although she was doing, I think the epidemiology part of it. She wasn't a manager at that point.

I think the next state to settle was Texas. And they got rid of the vilification clause and did some other good things. The next case to settle was Minnesota, which is where the documents were released.

And they got even more money, and-and set up an independent foundation, and did a bunch of other stuff. I'm pretty sure the Minnesota settlement also had provisions in it about the movies.

The movie provisions may have even been in the earlier settlements. I can't remember. I don't know exactly why the AGs [were interested in smoking in the movies]. This is 1998, before the Smokefree Movies campaign started. It may well have been that Sylvester Stallone document.

When the Master Settlement Agreement came along, which was the big settlement of the 46 remaining states, it included language on the movies. It's not great because it talks about prohibiting paid brand placement. And exactly what that means is not totally clear.

But it certainly upped the ante, and if you look at the number of incidents of smoking in the movies it dropped, and the brand placement started dropping around then, and it dropped quite a lot over the next couple of years.

If you look at the incidents [of onscreen smoking] over time there's a big dip after [the MSA]. It takes a while to make a movie so it's not instantaneous. [In addition,] the attorneys general are responsible for enforcing the Master Settlement Agreement [as implemented in the subsequent individual state settlements].

In the MSA there's hundreds of billions of dollars involved. There are restrictions on tobacco marketing to kids. They're not perfect, but it got rid of billboards. It got rid of a bunch of sports sponsorship. It got rid of a bunch of other bad things, but there's a need for continuous enforcement because the tobacco companies are always trying to weasel around it.

So there is a Tobacco Working Group of the National Association of Attorney Generals, which is called NAAG. The MSA did put the tobacco in the movies issue of in the lap of the attorneys general because it was in the Master Settlement Agreement. And there has always been at least some of the attorney generals, and more important, deputy attorney generals who are the career people, who have been interested in this.

The guy who is currently the kind of lead on the issues is Rusty Fallis from Washington State. The person who did it for a long time before that who is retired is from Maryland is named Marlene Trestman.

The attorneys general are political animals, and sometimes they're more willing to move than others. But that's how they got engaged, and if you read the attorney general section of the website they've been very important players [https://web.archive.org/web/20221029215029/https://smokefreemedia.ucsf.edu/policy-solutions/state-attorneys-general].

In fact, one of the problems now is that enough time has passed that most of the attorney generals who are around when all of this [the litigation and negotiating the MSA] first happened

they're gone. They're either retired, or dead, or went on to some other political role. One who's been very strong through the whole thing, and is still there is the Attorney General of Vermont [William Sorrell]. That's the AGs' role, and we're constantly trying to figure out how to re-energize them. The AGs have always they've always had a very important presence in consumer protection, and stuff like that.

They have a history of working together, too. Not all of them, but some of them. I think the tobacco litigation was the biggest, most aggressive, highly coordinated national effort that the AGs had ever done. And it scared the shit out of a lot of big corporations.

The pressure that they mounted [on the movie industry] and the letters that they've written, some of which we've helped them do, and some of which they did all by themselves—Bill Sorrell. He's the AG of Vermont—have definitely played a really important role in putting pressure on Hollywood.

The [American] Legacy Foundation, because it was created out of the Master Settlement Agreement, has kind of a special working relationship with NAAG. And they've remained stalwart on this issue, and so, that's helped.

SFM-Stewart-Glantz-2015-06-24-Audio

The Master Settlement Agreement isn't a law. It's a contract. It's an agreement between the [cigarette] manufacturers who signed it and the individual states. [Specifically, it the structure for] 46 different [but more or less] identical agreements between the individual states and the tobacco companies.

So what happens if there's a violation? Let's say you're RJ Reynolds and you put a kid-oriented ad in *Rolling Stone* magazine—which they did. You would think that there could be one process for bringing a complaint against Reynolds [on behalf of all the settling states] and forcing them to comply [with the terms of the MSA].

Unfortunately, that's not how the MSA works. Every state has to file an action against Reynolds. And then, they individually reach some agreement. They go to their judge in their state, and the get the judge to say "you're bad, you have to change."

That situation fractured enforcement of the MSA because every state had to take a separate action. And just because state A did something, that wasn't binding on state B.

So that's greatly complicated implementing the MSA.

The way that the Attorney Generals responded to that is working through the National Association of Attorney Generals, NAAG. They created a Tobacco Working Group. In fact, [I think they] had a Tobacco Working Group [before] the MSA that was helping to coordinate all the individual state suits.

If you look at MSA enforcement actions, sometimes one state will do something, but much more often a bunch of them will get together and do it together by concurrently filling in all of their states at once. They'll work together on the briefs and then all file essentially the same brief.

For a long time, Marlene Trestman from Maryland [chaired the NAAG working group]. The Attorney General of Maryland was Richard Blumenthal who is now a senator. He was very committed on the movie issue.

And they worked with the Thumbs Up, Thumbs Down people in Sacramento, which Curt Mekemson initially, and now Kori Titus runs. [TUTD sends trained high school students] into the movies every week and look at [top 10 box office] movies, and every time they saw a brand in a movie, they told the [California] Attorney General's office. And then, the [AG's office] wrote a nastygram to the tobacco companies. I don't remember if they sent it to the [company that made the] movie, too.

One of the other things that the Master Settlement Agreement provides for is that every three years there's a meeting between the attorneys general and the tobacco companies. It's called "the tri-annual meeting."

That [meeting] has provided an opportunity to push the movie issue. They've had the head of the Motion Picture Association there, Dan Glickman. I ended up sitting next to him at lunch which

was kind of fun. He wasn't a bad guy. [Vans Stevenson, the MPAA's long-time lobbyist, was sitting on his other side and desperately trying to block any meaningful discussion of smoking in the movies.]

At several of the tri-annual meetings, the movie issue was there.

Because the American Legacy Foundation was created out of the Master Settlement Agreement, they have a kind of special relationship with the AGs around MSA-related issues. And so, they always get invited to these tri-annual meetings.

Cheryl Healton, who was the President and CEO of Legacy, up until a couple of years ago when she stepped down [to return to academia], was the first major national leader to really embrace the movie issue. So, Legacy has been a really important player in pushing the issue from the beginning, and that's helped to keep the thing on the agenda with the AGs.

Another of the things that the AGs do—and this is on a wide range of issues—is they what people call "sign on" letters where they get a whole bunch of AGs to sign a letter to somebody.

Like years ago, I remember them doing an AG sign-on letter to McDonald's about making McDonald's smokefree. I remember going to Washington and being at a meeting about that when they decided because they had me come back and talk about the science, and some of the politics. What came out of that meeting was a letter to McDonald's, which ended up pushing them toward getting rid of smoking.

Sometimes it's written to businesses or governments or sometimes they'll get together—band together—and take some kind of action.

Like they did in the financial crisis thing. They coordinate—through working with NAAG, they filed a bunch of fraud law suits against the banks over sub-prime mortgages, for example.

And so they wrote many AG letters which are on the website [https://web.archive.org/web/20211203141634/https://smokefreemedia.ucsf.edu/history/correspondence].

And some of those things they did all by themselves and some of them they did because we suggested or encouraged them. There's no question that that's been a really important element of building the pressure on the studios because you know, if—nobody up until recently has come up with a legal theory where they could be sued, where they could actually take legal action against the studios. Although this case which is being worked on now could be.

But the fact that they'd been pushing on the studios, and the uncertainty that that's created for the studios, has been something which has been probably the largest single pressure point that's moved the issue forward because their lawyers have to be saying "What if these guys really get mad?"

At the same, they [the studios and MPAA] have blown the—they haven't responded to a lot of the letters. They've blown them off.

But you know, it's like having the police wandering around looking in your window and picking up trash in your front yard. You've got to wonder why they're doing it. And that's good news.

The bad news is that over time—it's been a long time. It's been nearly 20 years since the MSA was signed, and so, most of the original AGs are long gone. And the newer AGs have to be brought into the issue and brought up to speed.

The other thing is I think these are people who are used to being taken pretty seriously. And the fact that the MPAA and Hollywood have shined them along and blown them off, kind of has pissed some of them off. It's certainly pissed off the staff people.

But I don't want to overstate the negatives on this. The other thing is they're often pretty secret, because it's law enforcement. Often they don't tell anybody before they do something. So, they may have something cooking. At this point getting them out there making noise again would be [important].

I don't remember when we started talking to them, but they've invited me to a couple of the tri-annuals. They've invited me to more than I've been [able to attend] because I had teaching conflicts.

It's been a very cordial relationship. They will often ask us for information. Sometimes they'll let us look at a draft letter. Sometimes we'll suggest something to them.

[Another important issue aspect of the campaign was attracting the support of major national and international health organizations. The endorsers are listed on the website at https://web.archive.org/web/20221029214832/https://smokefreemedia.ucsf.edu/take-action/endorsements]

Initially, [Smokefree Movies] was something that just terrified the big national organizations because it terrified almost everybody. [Indeed,] one of the reasons I took this on was because it was "out there."

So the fact that they were like freaked out was to be expected. But Cheryl Healton was the first [leader of a major national organization] to say, "This is a really good idea, we need to do this."

One of the lessons of that is that you can beat bad guys and you can be out there as like a little advocacy group and taking weird positions, but you really need at least one big establishment group to legitimize it.

And so, I felt it was important to get the health groups on board. Also because there was this history of trying to work with Hollywood some of them were still doing things that were quite counterproductive.

And we needed to get that stopped. So there were two reasons to reach out to them. I think that the next group that got on board was the pediatricians.

And the American Academy of Pediatrics is by far and away the most socially-minded and progressive of all the medical groups. They were created back in 1930 when they split from the AMA over the issue of federal funding for children's health.) [For example,] training in public advocacy is required in residency programs by the AAP.

The [American] Heart Association CEO was somebody I got to be pretty good friends with, Cass Wheeler and he got interested. I had worked with Roman Bowser, who is the CEO of the California division of the American Heart Association, Western States, who was one of the heroes of *Tobacco Wars*. He was the one who broke with Cancer and Lung and went to war with the governor over the [to save the California] tobacco control program. So, we got the Heart Association engaged.

[The American] Lung [Association, Sacramento Emigrant Trails] was running Thumbs Up, Thumbs Down. [Later the ALA in California split into two organizations and the new Breathe California included TUTD.] It took a lot to get them in because their LA affiliates were just terrified of pissing off potential donors in Hollywood.

We got the campaign for Tobacco Free Kids to join in. The American Cancer Society has just refused to be part of this. And I haven't been able to figure out why. John Seffrin, who was the CEO up until about three months ago when he retired, was supportive. Several past presidents were supportive, people on their board. These are all friends of mine.

And a lot of the staff in the Cancer Society are saying "Why aren't we part of this?"

And I've never been able to figure it out. Sherry Lansing, who is a big fundraiser for Cancer, is a past head of Paramount and has a totally shitty record on the tobacco issue. She was regent when we came within an inch of having UC say we're not taking tobacco money. And she went to war with Dick Blum, who was then the chair of the Regents to block [a proposed] UC policy and not taking tobacco money. I don't know if it was her [who was blocking Cancer]. I don't know why, but they're the one that we didn't get. [A few years later, staff convinced the American Cancer Society to endorse Smokefree Movies.]

We haven't asked them to do a lot.

The main thing we've asked them to do is to put their name on it and their value as legitimacy. We probably have underutilized them. But that's how they got in.

What we do every once in a while is what we call partner ads. If you look at the—at the ads, most of them are Smokefree Movies, which is me.

But occasionally we do ones where we get all the big, national organizations to sign on. And those tend to be a little more restrained than the Smokefree ads.

But just being out there and reminding people [in the movie industry] that they're there, and paying attention has been helpful. We probably should have made more use of them.

The pediatricians have probably been the most engaged because of their basic advocacy orientation and that they care about kids more than anybody else. They have had some of their local chapters. AAP is very grassrootsy.

They're reluctant to order their state chapters around. But they have had some of the state chapters engaged. They have a tobacco working group, which has actually met here at UCSF. John Klein, who's their Vice President, is on the external advisory committee for this Tobacco Center. And they've done several events on the movies.

They've had sessions at their national meetings on the movies to try to get press attention for it. They've had me come talk to their tobacco working group. And then they've tried to engage local pediatricians. Jim Sargent, who's done a lot [of the underlying research]—he's a pediatrician.

So that's the health groups.

[The final important external allies were the socially responsible investment groups, particularly the Interfaith Center for Corporate Responsibility and As you Sow. These groups own stock in major corporations and use their role as shareholders to engage and push the companies. They introduced several shareholder resolutions on smoking in the movies over the years to press the media companies who owned the studios to engage and report on the issue. Unfortunately, the companies successfully kept all these resolutions off their proxy ballots supported by the federal Securities and Exchange Commission.]

[As shareholders company management is required to engage with these groups. Those high-level discussions occurred over several years and helped sensitize company management to the issue. The shareholder groups also funneled research and data to the companies, particularly the results of TUTDs analysis of their films. In fact, Warner went so far as to adopt the TUTD methodology in their own internal monitoring of smoking in their films. Through the investors, Warner shared several years of their data, which was remarkably close to TUTD's results. Indeed, Warner identified a little more tobacco use in their films than TUTD did.]

[The shareholders where who arranged my one-on-one meetings to discuss smoking in movies with responsible studio executives.]

[They also attended annual shareholder meetings and used the public comment section of the meetings to raise the movies issue publicly before top management. They also arranged proxy votes so that several smokefree movies allies could attend the shareholder meetings, raise questions, and try to engage corporate management.]

[The most remarkable of the annual shareholder meetings was the 2015 Disney meeting, which was held in San Francisco. ICCR arranged entry of Gina Intinarelli, a cardiothoracic surgery nurse and administrator at UCSF, and me to attend as proxies for two nuns. When Gina's turn to ask a question came up she told CEO and Chairman of the Board Robert Iger about the smokers she had cared for in the ICU and asked when Disney was going to get smoking out of their youth-rated films. To everyone's astonishment, he announced they had made such a decision and were in the process of implementing it.]

[The audience broke out in applause. (Here are details of what happened: https://web.archive.org/web/20150605231425/https://tobacco.ucsf.edu/disney-ceo-robert-iger-announces-ironclad-policy-no-smoking-youth-rated-disney-movies.) Disney has honored that decision ever since.]

Postscript: February 1, 2023

While, at least as of this date, we never convinced the studios to act through the MPAA to modernize the ratings system to award smoking (or other tobacco use) movies at R rating, the cumulative effects of the major studios' policies in smoking had almost completely eliminate onscreen smoking in youth-rated big budget movies that kids see. Based on the TUTD data, impressions (one smoking occurrence seen by one ticket holder) delivered by PG-13 movies fell 80 percent from 2002 to 2019 (from 17.7 billion to 3.6 billion) (Polansky, J. R, Driscoll, D., & Glantz, S. A. (2020). Smoking in top-grossing US movies: 2019. UCSF: Center for Tobacco Control Research and Education. https://escholarship.org/uc/item/86q9w25v).

Most of the major studios implemented the certification of no payoffs policy, which is reflected by the fact that our recommended disclaimer still appears at the end of movies that include tobacco use. Time Warner was the first studio to do so, using the statement "No person or entity associated with this film received payment or anything of value, or entered into any agreement, in connection with the depiction of tobacco products."

Several studios added anti-smoking ads from the State of California to their DVDs of smoking films for several years, although this policy drifted away over time.

The greatest challenge on the issue has been the rise of streaming, which led us to reframe the campaign as Smokefree *Media* in 2021, including a redesign of the website to become Smokefreemedia.ucsf.edu (archived at https://web.archive.org/web/20230000000000*/https://smokefreemedia.ucsf.edu) with the https://smokefreemovies.ucsf.edu URL redirecting to the new site.

COVID-19 also severely disrupted Smokefree Movies in two important ways. First, the evidence base of how much smoking was in which films and who made them came from Breathe California sending trained high school volunteers into theaters every week to record the presence of smoking in new top 10 films. This ground to a halt because it would not have been safe to send kids into theaters (if they were even open). Second, the pandemic accelerated the shift to streaming where audience data (needed to estimate actual exposure to kids of smoking and other tobacco images) was not publicly available. In addition, the universe of content is much larger than for theatrical films, making it hard to know what to code. There is also not a clear effective policy through the rating system, which is even weaker for video than theatrical films.

The effort is continuing as a partnership between the Truth Initiative (updated name for American Legacy Foundation) and UCSF CTCRE, although the ad campaign has been dropped.