

## An Academic Biography

Note: I have been asked by Carnegie Mellon to provide an oral history covering my 35 years at the university, my career before coming to it, and the development of the Philosophy Department. I do not like oral reviews—too much is forgotten in the moment, especially at my age. I prefer to write. So here it is, in very rough sequence from a very personal viewpoint. I don't remember many dates. Apologies for the random capitalization.

### Preface

I was born in 1942 in Pasadena, California. My father was a carpet layer, working for his father, and before her pregnancy my mother was a secretary for a union. Neither of them went to college. My father's father, however, had a degree in chemistry taken at the Swiss ETH. Albert Einstein was a schoolmate.

A few days after my birth, my family moved to Troy, Utah, a tiny Mormon village in a narrow mountain valley outside of Logan. My parents raised chickens; my father added to whatever small income that brought by hunting and by breaking wild horses captured in the neighborhood. By 1944 we were bankrupt and moved back to Los Angeles and my father joined the Army. I remember Victory over Japan day merely as a peculiar moment when everyone was in the street, shouting.

After the war and my grandfather's death, my father quit carpet-laying and began selling insurance, which he was good at and hurt his knees less. He was transferred to Butte, Montana—oddly, a promotion to a place he had lived when he was 3 years old. I was 13, and I went to high school there, for the most part, happy school years in a marvelous, hard town. I wish my children could have grown up there in that time. The high school had one famous graduate, Evel (Bob) Kniewel, a couple of years ahead of me. Social mobility: my grandfather went to university with Einstein, I went to high school with Evel Kniewel. I had jobs, most notably Saturday grocery deliveries for Milo's Main Street Market. My route included deliveries to the Mercury Street brothel, now a National Historical Site with a bronze plaque and all. My only trouble in high school came when the Principal asked me to give a brief talk at the Rotary Club luncheon. I told the Rotary Club that the Butte School system had done good work for mentally handicapped (in those days we said "retarded") students, but not much for academically talented students. I suggested Advanced Placement Courses might be started. Enraged, the Superintendent of Schools had me suspended for two weeks. That was a portent.

My philosophical education began in Butte. Although my father was unschooled, he was well read, and he had a small, but in memory, excellent library. I spent the summer of my 15<sup>th</sup> year trying to fathom Spinoza's *Ethics* in our backyard overlooking the tracks of the Butte, Anaconda and Pacific Railroad, which carried copper ore from Butte to Anaconda. Fortunately, that

summer I also read *The Origin of Species*. I could make sense of Darwin. That left me feeling less stupid for finding in Spinoza only a sequence of obscurities and non-sequiturs. I had one compelling question: what are the borders of possible knowledge, the limits, and how can we get closer to them? I think Darwin inspired that question, although he never posed it. That question has endured.

The politics in my family had always been Left. My parents voted for Henry Wallace in 1948. My political education was provided by the Anaconda Copper Company. The Company ruled the town with the power of eminent domain and turned the eastern quarter of it into an open pit mine, in the process tractoring over Columbia Gardens, the only big park in Silverbow County. Barbara Ehrenreich, the excellent social commentator, spent part of her youth in Butte (I did not know her) and describes some of the destruction the Company wrought. I have never liked or trusted corporations since. I think people who own stuff like mines and factories and power plants and paper mills should have to live beside them.

I enrolled at the University of Montana in Missoula in 1960. Tuition was \$50.00 each trimester, and I had a partial scholarship, so it amounted to a hundred dollars a year. The hundred I made as a short order cook in the University Lodge and summers pumping gas in Yellowstone Park. My father grew up in the depression and he thought of college as a way to security. He wanted me to be a lawyer; I had no interest at all in that prospect. Out of curiosity, in my first week at university, I sat in one night on a single credit adult course on the history of philosophy. The instructor was a regular faculty member, Cynthia Schuster, an animated stick figure of a woman in her fifties, her hair in tight braids round her head, literally dancing to some inner music as she spoke. I never looked back. She became my mentor for the rest of my abbreviated career at Montana, and later managed to get me into graduate school at Indiana. She had lived in Europe through the second world war, been starved and interned, and upon beginning her teaching career at Washington State University she was fired for inviting Robert Oppenheimer to campus and thereby "corrupting the youth." The latter charge amused her, as it would any philosopher. She had a wiser, deeper view of humanity than any academic I have ever met.

The books in Butte available to me were my father's and those I borrowed from the family doctor, so at Missoula I was fascinated by the university library. I went there every afternoon I could and started reading. Beginning with "A," I went book by book, not the whole of anything, just enough to figure out what it was about, and then went on to the next. About scholarship, I was as naïve as it is possible to be. One day finding Cynthia in her office complaining about the small budget to buy new books, I asked her "Why are you concerned? You can't have read all the books that are already there."

The University of Montana was a land-grant college, which meant that it could, and did, require all able-bodied male students to enroll in Reserve Officers Training Corps. I did, and I hated it. I was issued a uniform with buttons to polish. I learned to disassemble and reassemble an M-1 rifle (no bullets: the ROTC officers weren't that stupid). I turned out one afternoon a week to march in uniform. Worst of all, I attended a required course taught by young officers who were

never going to get much beyond lieutenant in the Army. The classes were appalling. Small lecture sample:

“Back in the day we could only kill one person at a time with a rifle. Then we got bombs that could kill hundreds of people at a time. Then we get the atom bomb and we could kill a hundred thousand people. A hundred thousand! But now we have the hydrogen bomb. We can kill a million with one bomb! Man, oh Man!”

I could endure the button shining and marching, and I kind of enjoyed taking apart the rifle, but I could not stand the classes. I found them obtuse and morally obscene. So I stopped going to ROTC, just stopped, the whole thing. Some among my circle of friends avoided ROTC more resourcefully. Bruce Boettner, my best friend, simply tore up his enrollment cards (yes, we enrolled by paper cards), and the university took several semesters to figure that out. Another friend, David, an anglophile who in his teenage years telephoned Sir Winston on his birthdays to wish him happiness and good health, adopted a very English plan. He showed up for the weekly ROTC march in a white suit, spats, and with an umbrella in place of a rifle. He and the university made a deal: he wouldn't attend ROTC and they would let him graduate. My friend Jack Mueller, son of one of the many Communist families in Butte, had been in the 6-month Marines and was in the Marine Reserve but was still required to take ROTC. He put on his Army uniform, adorned it with swastikas, and spent a day marching around campus, giving the Heil Hitler salute to every ROTC officer he saw. He was, as he planned, dismissed from ROTC. Unplanned, his Marine Reserve commander summoned him to be reactivated. Jack explained to the commander that he had protested because he, Jack, was a Marine forever and could not stand wearing a stinking Army uniform. The commander sent him back to the university. But me, I was just unimaginative. I told the administration I wasn't going to ROTC any more, period. The university said, as you wish, but we will never allow you to graduate. So at the end of my sophomore year I transferred to the University of New Mexico, one of the saddest and best things I ever did.

At New Mexico the philosophy department was obviously a pack of fools, writing about nature's "polarities" and other quasi, crypto mystical stuff. I had transferred enough credits for the philosophy major, so I decided on a second major, chemistry, for an accidental reason that contains a lesson. Browsing in the university bookstore, I picked up a book, Herzberg's *Atomic Spectra and Atomic Structure*. Reading it as I had the library books in Missoula, I was fascinated. Who would have thought that *light* would be a key to the structure of matter? I became a chemistry major. Which is why universities should have good bookstores, even if they run at a loss. The University of Pittsburgh does, but despite my efforts and many broken promises, Carnegie Mellon does not.

My chemistry career was interesting but not happy. I was terrible in the laboratory, and I did not have enough mathematics to see a way forward as a theoretical chemist. I did manage to get a decent grade in quantum mechanics before I had taken calculus, but only with the help of a graduate student who could calculate but could not read. I disliked organic chemistry so much that I took the second of two required semesters by examination, just to get it over with.

Teaching freshman laboratory courses for three hour sessions that took the students half an hour to complete, and forbidden to release them early, in the remaining hours I started giving the captives lectures on the history of chemistry. I decided that if the history was most of what they were doing, I should test them on it. I was nearly fired when the Chair of Chemistry, Raymond Castle, who spent his career trying to make a compound that would explode when exposed to green laser light, discovered that I was asking the students about Paracelsus. New Mexico must have had able faculty somewhere, but it was well-supplied with fools in departments of philosophy and chemistry. I spent a year there as a graduate student trying to make a “molybdenum sandwich” compound, and failed. But the long nights with racks of test-tubes bubbling away to become so much chemical mud did have a payoff: I read Hans Reichenbach’s *The Direction of Time*. If I could not be successful chemist, and I could not be the kind of philosopher that New Mexico seemed to want, I could be *that kind* of philosopher, Reichenbach’s kind, the kind that tried to answer my adolescent question. I applied to Indiana University in History and Philosophy of Science. Cynthia Schuster intervened with a friend on the faculty, Wesley Salmon, to have me admitted. In the meanwhile, I had married the wrong woman. The right woman grew up to be an eminent field ecologist, but I suppose if she had married me she probably would not have.

Except for some extreme poverty early on, things went well enough at Indiana. My graduate student career was interrupted for a semester in 1968 when I took off to campaign for Eugene McCarthy, who was an anti-Vietnam war candidate for President. I ran the campaign in eastern Oregon and part of Los Angeles. We lost, and in Los Angeles I had one of those Forest Gump moments. I was in the neighboring hotel un-celebrating McCarthy’s loss in California when Robert Kennedy was shot. The next day I helped Kennedy’s staff—kids like me—clean up and empty out the Kennedy campaign headquarters. I went to Chicago for the Democratic convention, but the lot of us were told there was no point. The money guys had picked Hubert Humphrey, who had not won a single delegate by popular vote. My dyspeptic view of corporations expanded to politicians. Otherwise, at Indiana I got into no trouble, I graduated, and I was hired at Princeton. Unbeknownst to me, my Princeton appointment was a two-year terminal contract, but the department changed that, again without my knowing. Aside from feeling I was being judged every day—I was—Princeton was happy, and after I was voted tenure even that feeling went away. I spent a semester’s leave back in Missoula, and a year’s leave on the Appalachian farm of a friend from high school, Don McCaig and his wife, Anne. They raised sheep and Don wrote novels and together we had a milk cow, Rosehips, and a passel of pigs.

My former wife detested Princeton and Princetonians. She wanted to move to Oklahoma, where her parents lived, so I resigned tenure at Princeton and took a job at the “University” of Oklahoma, which deserved a more appropriate name. I did not get on with the senior faculty—at my first department meeting one my new colleagues stood up and announced that everyone he had met from Princeton was a “pinhead.” So I focused my efforts on raising pigs, which I fed with expired meals-ready-to-eat rations left from the Cold War on an entire floor of what passed for the University of Oklahoma library. The librarian was glad to be rid of them. Two years later, newly divorced, I moved to the University of Illinois at Chicago, where I had a good

time lifting weights with my new colleague, Douglas Stalker, who remained a friend for life, and briefly essayed boxing. I stayed in Chicago for one year before moving to the University of Pittsburgh in 1979.

### Carnegie Mellon

In 1984 I was approached by people from Carnegie Mellon about forming a philosophy department there. CMU wanted a Phi Beta Kappa chapter, and PBK only allowed chapters with philosophy departments, so the President of the university, Richard Cyert, was determined to have one. The search committee included Dana Scott, Jay Kadane, Preston Covey, and Steve Fienberg. Dana had been my senior colleague at Princeton. Jay and Steve had for some time wanted to bring Teddy Seidenfeld to CMU, and they knew I knew (and admired) Teddy from Pitt, where we had briefly been colleagues. They figured, rightly, that if I were put in charge of forming the philosophy department, Teddy would be offered a place in it. There was another candidate for the job of Head, a quite able philosopher, who when interviewed gave a pitch about how philosophy addressed the various specialties of each member of the search committee. The committee found that way too calculating, and so I was offered the job.

I was dubious. The salary offered was larger than my Pitt salary, but not a lot larger. Cyert wanted a department focused on logic and philosophy of the social sciences, each of them minor interests of mine. There were several people employed in the History Department to teach sections of introductory philosophy. I met them, and realized I would probably have to fire most or all of them. The Academic Vice-President, Patrick Crecine, promised me “eight to twelve” positions for the new department. I didn’t trust him. I liked the Dean, Charles Kiesler, well enough, and he was enthusiastic and seemed a straight shooter, but I didn’t know how much pull he would have. Why take a job like that? I had a sinecure at Pitt, no troubles, no sweat, one of the best ranked philosophy departments in the nation. I was happy enough there, and forming a new department meant recruiting, organizing, negotiating, firing, creating a curriculum—bound to be a ton of work and maybe a misery.

Cyert gave a “town hall” for the CMU faculty; I attended and I was impressed. Cyert didn’t lecture, he invited questions and criticisms, and he got them. He defended his decisions with reasons. No nonsense, no evasion, no waste of time. I thought I could work with a guy like that. He was a man who could not give a speech or tell a joke, but he was the best administrator I ever worked for.

In the end, I took the job because of my adolescent question.

While on leave from Princeton in the mountains of western Virginia, I had read some papers by two mathematical sociologists, Hubert Blalock and Herbert Costner. They had shown that in a few simple examples they could distinguish possible causal explanations by statistical patterns in the data. I wondered: could there be a computer algorithm that would identify all the relevant statistical patterns in any collection of data and determine which causal explanations could account for those patterns? Silly idea, of course, but silly ideas sometimes lead to good

ideas, and I was too ignorant not to try. I recruited three Pitt graduate students to the project, Kevin Kelly, Richard Scheines and Peter Spirtes. I bought a dumb terminal (the only kind there was in those days) to connect to the university mainframe so that we could program and run algorithms. (I was dumber than the terminal. With my penknife, I broke a critical dipswitch within an hour of taking the machine out of the box, so I had to buy another terminal.) We made progress, we had ideas, we formed more feasible conjectures, we coded our algorithms and ran the programs, but my graduate students were going to graduate, and that would be the end of the project. I knew I couldn't do it alone.

I had been promised an almost free hand in hiring if I moved to CMU, which meant I could hire my Pitt graduate students in the new philosophy department. I could continue the project, which by then obsessed me. I took the job. Eventually, all three became colleagues at CMU, first Peter and Kevin, then Richard.

The timing wasn't the best. I had remarried and my spouse, Alison Kost, was pregnant, and I was looking at 80 hours a week. Hard hours as it turned out. Forming the new department should have cost me my second marriage, but, good fortune, I had married a very tough-minded saint. She had been a federal investigator, who spent election days in the deep south watching for voter fraud. If she could deal with southern sheriffs twirling their pistols at the polls, I was cake. Now she runs a hepatitis clinic for the indigent.

I started forming a department at CMU in 1984 while still working at Pitt. I was given an office at the back end of the English department. I moved the philosophy teachers in History into that office, along with me, and I insisted the Dean meet with me there. My idea was that every time we met, the Dean could see five faculty packed into a single room, and would think, "Glymour needs more space." Whether that worked or not, I got more space. I offered a job to Teddy, who was then at Washington University in St. Louis. He accepted. Dana told me about a brilliant young logician at Columbia, Wilfried Sieg, whom Dana knew wanted a better place than the City to rear his children. We offered Wilfried a job, and he accepted. Peter and Kevin joined the department. I was in business. I had four new colleagues, two of whom shared my research project, and all of whom shared my view that real philosophy is not divorced from the mathematical and empirical sciences. I ransacked used furniture stores to provide desks and chairs. One of my daughters, Holly, and I painted offices—the department could not afford to have campus painters do the job. I did not fire the philosophy teachers in History, but they were now in my department and I told them they would not be reappointed or promoted unless they published good papers. All of them, except David Carrier, left rather than come up for reappointment or promotion. Carrier, who had tenure, eventually moved to Case Western. One of them, Ernie Alleva, I regretted to see go. He spent a lot of time with undergraduates and entered into student life in an original way: he was the university's lightweight wrestling champion. But I couldn't build a department that would set a new standard for philosophy with faculty who wrestled well and liked to talk. I did try to fire the secretary, Julia, because she seldom came to work. After she had not shown up for work for most of a month, I drove to her house to tell her I would have to replace her. As I walked up to the door, it opened, and without a word from either of us she handed me her keys to the department. After some good

and bad staff interludes, I hired Jackie Defazio, who was then in the English department. She has been the mainstay of the department ever since: smart, competent, friendly, wise.

I had a problem. The philosophers in History had taught introductory philosophy in many small sections. I couldn't attract or keep talented faculty by assigning them to teach nothing but introductory philosophy sections, and I couldn't create or sustain any kind of philosophy major that way. I had to free my colleagues' time for new courses. There was only one option. I dispensed with the small sections and made one large introductory philosophy class of about two hundred students, offered each semester. I taught it. But that was only half of a solution. I had no graders and no budget to hire even a single grader. I couldn't run the department, give the lectures, and grade essays and exams for so many students.

I hit upon a remedy from my days at Princeton. There, ambitious students took careful notes in my logic classes and sold them to their less ambitious classmates. I supported the project as long as the notes were given to me to correct before they were sold. Some colleagues in the Math department did the same. The practice offended the sense of propriety of a professor of history, who placed the matter on the agenda of the faculty senate. The faculty voted to prohibit me in particular, and everyone else in general, from collaborating in any way with the sale of lecture notes. Pleased, the history professor sat down on his stick. Now, at Carnegie Mellon, it occurred to me that I could sell lecture notes. So I did, and used the profits to hire a grader from Pitt. After five years, the lecture notes became a textbook, which is still used at CMU and perhaps a few other places. Likely, if the internet had existed at the time, CMU would not have a Philosophy Department.

My introductory course focused on developing reasoning skills via the history of philosophy. There were lots and lots of problem assignments that were chiefly a matter of applying definitions to unambiguous cases, sometimes requiring a bit of formal reasoning. To see whether the course had any good effect, I devised a pre-test taken from questions on the Law School Admission Test, or LSAT, which are mostly a matter either of elementary logical reasoning or applying definitions consistently. I salted the final exam with another set of questions from the LSAT. Because I taught the course in the Fall and Winter semesters, and students were more or less randomly assigned to the Fall or Winter editions, I could test effectiveness by comparing the Fall post-test with the Winter pre-test, and follow up with the Winter post-test, all with LSAT questions. The students showed a 20% improvement. My reward was a letter from the Dean, Peter Stearns, denouncing me for not giving the students the standard course assessment forms. I have never given those, and once they became automated, I urged my students not to fill them out. At the beginning and the end of each course, I tell the class to write to the Dean if they really despise the course, because he can possibly fire me, write to my department head if they really like the course, because he sets my salary, and write to me if they have ideas for improving the course, because I can do that.

In 1984, while still officially at Pitt, I began attending the reappointment and promotion meetings of department heads in the College of Humanities and Social Sciences at CMU. The English department had hired an assistant professor, David Evans, who was a computational

linguist. Evans was up for reappointment after his first two years and the English department wanted to fire him. The reason given by the Head of English was that Evans was collaborating with faculty in computer science, specifically Dana Scott, not with any of the faculty of English. This struck me and some other heads as an absurd reason. English had hired a *computational* linguist—why the surprise, let alone the objection, that he collaborated with computer scientists who shared that interest? David Khlar, Head of Psychology, proposed that Evans be moved to the about-to-be philosophy department. I agreed, and it was done.

Evans was an extremely ambitious and impatient man. He argued that we should have more computational linguists. That made sense to me, since my idea in staffing the department was that every faculty member should have colleagues in the department who shared research interests. So, with Dana Scott and Evans I met with Cyert and the Academic Vice-President, Patrick Crecine, and made the pitch for three new positions for computational linguists in the Philosophy Department. Cyert agreed and right then instructed the Academic VP to see that I got the money to hire. For months afterwards, Crecine stalled, postponed, equivocated. He neither came up with the money nor promised a date when he would. By that time, the internet and primitive email was around, and I was fed up. I sent an email letter to every department head in the university, and every administrator I knew of, explaining that at a meeting with Evans, Scott, the Academic VP and myself, on such and such a date the President had authorized the hiring of three new faculty in computational linguistics, and I was now proceeding to make the authorized appointments. That night I was working in my office with Richard Scheines when Crecine called. It wasn't a conversation. He simply swore at me over and over while I held out the phone for Richard to hear. I got the money, and we hired three and eventually four computational linguists. They turned out to be a demanding, quarrelsome bunch, and eventually all but one of the computational linguists left CMU. The nice one moved to the Language Technologies Institute when it formed. The Philosophy Department kept their salaries, which, along with the death of Preston Covey and the resignation of David Carrier, had the result that we were able to make excellent appointments in logic, philosophy of science and ethics, and, indeed, linguistics. All's well that ends well. We had other transitions. Dan Hausmann, an able philosopher interested in economics, joined us and then left for Wisconsin. Richard Scheines, who had been supported in the department on soft money grants, became an assistant professor. Mandy Simons, a linguist, joined the department.

As a new department head, Cyert invited Alison and me to a dinner at the Duquesne Club for some occasion I do not remember. It was a large group at multiple tables and I was seated with Margaret Cyert, his wife. She asked me what I was teaching. At the time I was teaching a course on Freud and the history of psychoanalysis and I said so. Her eyes grew and she said, in a very audible voice, "How interesting. Let me tell you about *my* psychoanalysis." Before another word could fall, Dick Cyert rushed from his table to ours and took her away, far away.

I had continuing problems with the English department. Observing that a lot of my students did not write well, I inquired about the writing course taught in sections by graduate students and adjuncts from English and required of every undergraduate student in the university. Specifically, I suggested that pre and post tests be implemented with independent judges, only

to have the idea dismissed. I was sufficiently annoyed that I asked to teach a section of the writing course, and did. I found it hard work. The only way I know to teach writing is to have students write and write and write, and to correct and correct and correct, preferably as they are doing the writing. (David Kaufer, in English, has since developed software aids that actually help.) I couldn't correct as they were writing, but each week I took two or three of their weekly written efforts, projected them on a screen and corrected them in class (thanks to an old version of Microsoft Word, which made it easy and very visual). I think the students got better, but that would have been for others to judge, and I had no judges.

Over the years, by far the most frequent complaints I have had from undergraduates is the required English course, now called "Interpretation and Argument." Their objections are to some of the content forced on them—variously, unwashed Marxism and Freudianism, post-modern gibberish, and social justice warfare—and that the course did not help their writing. The current Dean, Richard Scheines, recently held a town hall meeting that asked why Humanities, and the Dietrich College (Humanities and Social Sciences, rebranded after the sale of naming rights) in particular, does not receive more respect from students in other colleges. The principal answer is obvious. The first and universal contact those students have with Dietrich is "Interpretation and Argument." A secondary answer is the advising in other colleges, notably Engineering. To fulfill their required humanities elective, students are not allowed to take courses in Dietrich with any substantial mathematical content, the courses they might most enjoy. The *Two Cultures* are rigorously enforced by the advisors in Engineering, although I suppose they have never read C.P. Snow. A third answer is that courses on the history of science and engineering—again material that might genuinely interest students of these subjects-- have been thinly represented in the College. The combination of science and humanities, Science Studies, was outside of Dietrich. The remedies are in the hands of the Dietrich faculty and Dean. I am pessimistic that they will happen.

The English department has a section of "Literary and Cultural Studies." While I was Head of Philosophy, the English department recommended Paul Smith, of that ilk, for tenure. All department heads sit on the College committee that recommends reappointment or promotion, or not, to the Dean, who then makes a recommendation to the university tenure and promotion committee, which then makes a recommendation to the Provost, who then makes a recommendation to the President, who then makes a recommendation to the Trustees, who make a final decision. What, as they say, could go wrong? A lot. My practice was to read not just the promotion folder, but whatever I could find and fathom that a candidate had published. Smith had written a book on Clint Eastwood, whom he viewed as pretty much an icon of everything wrong with Western Civilization. The book was a cornucopia of nonsense, with philosophical asides, analyzing Eastwood through the blurry microscope of French psychoanalysis. I wrote a long, intensely negative review of the book, which I distributed to all of the other members of the committee, to the Dean, and to Smith. The Head of English, Gary Waller, was enraged. He wrote me I had done the "most unprofessional" thing he had ever witnessed. I thought it was pretty professional. Smith got a marginal vote from the committee that usually means the case will not proceed to promotion. Fienberg, who was Dean, nonetheless pushed it through the university level committee, I think because he wanted

Waller's political backing on some endeavor. Smith left for George Mason within a year or so. George Mason turns out to be the refuge of my academic enemies.

After five years of teaching my introductory philosophy course—which had been promoted to a more advanced course with a bigger number—I was bored with it and decided to look around for something that needed to be taught in the university but was not. The absence of a survey course on the history of religion was striking. I went to David Miller, professor of history, and talked to him about what should be done. He taught a course on early Christianity, and gave me some suggested reading there, but no indication that he was interested in a broader course. I knew a good deal about the history of philosophy but nothing about the history of religion. I spent my evenings and very late nights for the next two years reading and organizing my thoughts. The result was the kind of history of religion course I wanted, one that treated developments with as much dispassion as historians attempt for the history of science or philosophy. No punches pulled, from Judaism, Christianity and Islam. Some of the Jewish students protested to the Dean that I would not excuse them from course responsibilities for Jewish holidays that were not scheduled university holidays. I received a letter complaining to me about the matter from the Vice-President for Education, Indira Nair I believe. I invited her and the President to meet with me and talk about my policy. No response to that.

I gave “God in the West” to a small audience because it did not fit in any of the college's arcane distribution requirements. So I applied to have it included. My application was rejected personally by the Dean, Peter Stearns, because, and I quote, it was “politically incorrect.” He particularly objected to my objective treatment of Islam, and not on grounds of inaccuracy. Fortunately, the next year he left CMU for George Mason. Great riddance.

In those years I had adopted a policy. It quickly became clear that I was in for a lot of struggles with administrators, including a series of hapless—or in Stearn's case, malign--deans who succeeded Kiesler. I started wearing suits and ties and returned to serious weightlifting. The administrators were all male, and males send each other silent signals of dominance by their clothing and their physical conformation. I was going to need to project all the intimidation I could muster.

I remained Head for five years, gladly surrendering the job to Teddy Seidenfeld, but not without incident. The custom each year was that a department head would receive a draft budget from the Dean, read it through and negotiate any errors or changes, and then at a meeting with the Dean would receive an official budget to sign. In the transition year, my last, I shared the proposed budget with Teddy, and it was sent back to the Dean, at that time Steve Fienberg. A meeting was arranged for the official signing, but Fienberg did not appear. Instead he sent his Associate Dean, Michael Salomone, who passed me the official budget to sign. Fortunately, I read it. All was as agreed except that both Teddy's salary and mine were missing. Nothing, zero. I pointed this out to Salomone, who replied that we could raise our salaries ourselves. I had put aside some thirty thousand dollars in department savings from faculty buyouts, and I figured that was what Fienberg was after. I told Salomone he was not going to be able to leave the room without authorizing salary lines for Teddy and me, and I offered him a deal: he would get

the thirty in return for our salaries and I would let him live. I was indebted to Fienberg both for my job and for helping in the publication of a book with Spirtes and Scheines, which has become kind of a classic, but my lost esteem for Fienberg never recovered. Salomone had none to lose.

That book, *Causation, Prediction and Search*, holds a lesson about reviewing under bias. Fienberg leaned on an editor at Springer to publish it, and the reviews were ok. But suddenly a French reviewer sent in a revised report, urging that the book not be published. A main algorithm, the PC algorithm, was obviously incorrect he wrote; it could not possibly produce what we claimed for it. He gave reasons, and his reasons revealed what had gone wrong. The algorithm was in two stages, and in the manuscript the two stages were on succeeding pages. The French critic has simply failed to turn the page. The book now has almost 7,000 citations and, despite some mindless flack, has influenced hundreds of researchers. I do not exaggerate about the mindless flack. I was asked to give a symposium related to it at the American Statistical Association. My commentator, Edward Leamer, an econometrician at UCLA, announced that he had not read my paper because there couldn't possibly be anything in it worth reading. (Leamer was denounced by his thesis advisor, who was in the audience.) Under pressure from Kevin Kelly, a philosophical critic at a convention admitted he had not read a word of the book he was criticizing. Dag Sorbom, a social scientist, had a commercial program for discovering causal relations that we showed was essentially a coin flip. Sorbom wrote me that nature could never produce any causal relations his program could not find. A distinguished sociologist wrote me that our mathematics was all wrong and gave a detailed counterexample. He had inverted a correlation matrix incorrectly. At a conference on causal inference and statistics, David Freedman, an eminent statistician at Berkeley, gave an hour-long lecture denouncing the book, "quoting" passage after passage and showing each was absurd. Each quotation was a deliberate lie. I wrote to Freedman afterwards and pointed out all the cases I could remember. His response: "Ok, I lied. So what?"

I tried to have the university help me and my collaborators patent the PC algorithm. The response was dismissive. Now several commercial programs use versions of the algorithms and of others we developed. To my pleasure, two of my daughters and my son developed interests on graphical causal models, and one of them, Madelyn, a Carnegie Mellon graduate in Logic and Computation, became a data analyst for the department.

I had an inadvertent contretemps with Rob Kass in Statistics. At the behest of the McDonnell Foundation, I organized a small meeting in Santa Fe and invited Rob, whose work I admired. He gave a talk on Bayesian statistics, to the effect that the classical tests of General Relativity were a paradigm of Bayesian reasoning. I pointed out that the least controversial of the tests—the advance of the perihelion of Mercury—was used repeatedly by Einstein as a constraint on theory formation, in contradiction to Bayesian requirements. Rob thought he had been sandbagged, but I did not set him up intentionally. Years later, Rob came to see me about writing a letter in support of the Statistics, Psychology and Computer Science application in response to an NIH call for proposals for data analysis centers. He suggested I might say that the group could help our work on brain imaging because it would be able to handle very large

data sets. As it happened, I had approached Mike Tarr about joining the proposal to work on high dimensional data for brain imaging. Tarr was dismissive and I was not invited to join. I told Kass I would be happy to write a letter of endorsement but I could not say we needed help with high dimensional data. I said we could recover causal structure from causal systems with a million variables. He did not follow up with the letter request. We in Philosophy collaborated with the Pitt Medical School and received the grant for the center. Rob's CMU group did not. Later, to keep my word to Kass and to myself we recovered most of the structure of simulated causal system with a million variables using data for only a thousand measurement cases. But by and large, our relations with Statistics were fine. Teddy maintained a joint appointment and fruitful collaborations. Larry Wasserman helped us when we needed statistical advice. People in the CMU Statistics Department nominated me to be a Fellow of the American Statistical Association, and I and others learned a lot from two of the Statistics faculty, Jay Kadane and Cosma Shalizi. Jay and I taught two courses together. I came to admire him as one of the most morally imaginative faculty I have known. In various committees, faced with conflicting desires, Jay always seemed to find a sensible, ingenious solution. Naturally, committees being what they are, his solutions were never adopted.

I grew restless, not bored exactly, and not unhappy at CMU, but restless. It's in the blood. My grandfather, the one who went to university with Albert, was born in Switzerland, migrated to Germany, then to England, then to Chicago, then to Butte (!), then to California, then to Hawaii, then back to California. So when the University of California at San Diego came calling, I took the job they offered and moved to San Diego. Alison hated San Diego. She moved back to Pittsburgh and said I could come if I wanted. I wanted. Wilfried Sieg, then Head, gave me my old job back, for which I will forever be grateful to him. The matter did not end there. San Diego, reasonably, was unhappy that they had given me one of the few endowed Chairs in the university and I had stayed only a year. They demanded that I continue part time for at least three years more. San Diego has a quarter system. I agreed to teach at San Diego one quarter a year for the next three years, which entailed that each spring for ten weeks I taught at CMU on Monday, flew to San Diego Monday night, and flew back to Pittsburgh Thursday night to teach at CMU on Friday.

My year and three quarters in San Diego had benefits for the CMU department. I had three Ph.D students there in that short time, David Danks, Mara Harrell, and Joseph Ramsey, all of whom eventually came to CMU philosophy as faculty. Mara directs our undergraduate programs, David is department head, and Joe is our resident genius computer scientist. The appointments caused some restlessness among some of my colleagues, understandably. With those three appointments, something like 2/3 of the philosophy faculty were my former doctoral students, and it looked as though I might become de facto dictator of the department. Nothing of the sort. Only Peter Spirtes consistently agreed with me. Later, the department added another of my Ph.D students when Joel Smith joined it after retiring as director of computing for the university. Joel may be the best teacher there is.

We expanded in other directions as well, notably with the appointments of Mandy Simons and Tom Warner in linguistics, and Alex London in ethics, and Kevin Zollman in game theory. We

introduced new majors—a cross department major in ethics, history and public policy and a major in linguistics.

Jay Kadane, who was Chair of the Faculty Senate, recruited me to succeed him in that role. I wanted the job because I had a project. Anyone not asleep knows that the tenure system is stacked against young female faculty. At exactly the age when they are most likely to have young children, and bear the chief labor of rearing them, they are expected to research and publish like mad. How biology can be reconciled with the process is beyond me, but I thought that at least the university should provide a semester's paid leave for new mothers. Naturally, to make the matter legal, it would have to be new mothers *or* fathers, should the faculty father have the chief responsibility for the daily care of the child, but of course the main point was new mothers. So that was my project for the year I was Chair of the Faculty Senate, and a project it was. First, a faculty committee had to be formed, then the committee had to be persuaded to recommend the policy, then the Faculty Senate had to approve. That was the easy part. The hard part was the approval of the Administration. Even though I think the President favored the policy, it stalled. Nothing happened. I lurked and caught administrators and jaw-boned and went to a succession of meetings. Eventually, almost finally, I was told the Management Committee had approved the proposed policy. All that remained was the approval of the Chief Financial Officer. And he balked. So, suit and tie, I went to see him. His complaint was that he could not predict the costs. I explained that faculty were not a terribly fertile lot, and in any case the cost would be borne by departments in the form of a couple of courses not taught by each new mother. Occasionally, a temporary faculty member would need to be hired. Overall, the cost to the university would be small to trivial. He just looked at me. I stood against his closed door with my fiercest face until he signed the damned approval.

In the course of a year pursuing the motherhood leave policy, I could not get a single woman to join me at meetings with administrators. After the policy took effect, I did get a very nice letter of thanks from a new mother in Modern Languages.

What about women on the staff? That I thought was up to Staff Council. I don't know how hard they tried with what result. My dealings with staff committees left me bewildered. I was asked to serve as the sole faculty member on a committee to decide an award, I think of \$1,000, for the outstanding staff member of the year in the Humanities and Social Sciences College. The staff members of the committee found it difficult to decide among several candidates and forcefully complained that only one award could be given. So I offered to fund up to three further awards from my faculty research account. My offer was unanimously rejected. Multiple winners would, the staff members objected, cheapen the award. Go figure.

I had one other role in Faculty Senate, introducing a recommendation for partner benefits, which the Senate endorsed and which came to pass. The committee work on that recommendation was done by Toby Davis and Jay Kadane. I was just the messenger. The recommendation was fiercely opposed by Robert Griffiths, now emeritus professor of physics, so far as I could see entirely on religious grounds. I have never understood why some Christians regard homosexuality as a moral horror based on a few passages in Leviticus and Romans, while

passing over the instructions to stone disobedient sons, kill all males in captured cities that resist attack, not wear two kinds of cloth, and so on. Either the Bible is God's word, or it isn't. No picking and choosing.

As Chair of the Faculty Senate I met monthly with the Provost, then Mark Kamlet, initially with some trepidation. As Dean of the Heinz School, Mark had appeared in television advertisements supporting the construction of a new football stadium and baseball park to be paid for by a new tax, a proposition that was subsequently overwhelmingly rejected in a county-wide vote and rejected by a large majority in the city of Pittsburgh. I objected, I think in the newspaper, to using his status in the university in the endorsements. Besides that, I thought public subsidy of corporate entertainment facilities was terrible public policy. Mark wrote me a rather angry and, in recollection, incoherent, letter in response, with something about my opposition to United Way. (I had never given to United Way because they supported the Boy Scouts, but that's another story.) Later, when he discovered I had given the university children's school a \$5,000 award I received from Phi Beta Kappa, he wrote me a note of apology. But my meetings with Mark were wonderful, the highlights of the year. He was intensely curious, not just about administrative matters but about everything. Each month, we settled the administrative issues quickly and then talked about all sorts of things, quantum theory, Godel's theorems, real stuff. I count him a friend.

The Chair of the Faculty Senate gives one address to the Trustees. I used mine to urge them to use whatever influence they had to oppose the Patriot Act and allied executive orders, which made faculty who were not U.S. citizens—including my colleague Wilfried Sieg at the time (he is now a citizen)—subject to arbitrary arrest and detention. I am pretty sure the Trustees found my address just odd.

After the Greeks, philosophy has been pretty much an indoor subject. But we still care about the external world, outside our offices. Short of space, the university planned to place trailers next to Baker Hall, right outside the Philosophy Department. Teddy, who was then Head, got wind of it and intervened. He installed concrete benches in just the spots planned for the trailers. One bench was dedicated to John von Neumann, the other to Alan Turing. He knew the university couldn't touch those. Teddy is an ingenious man. At a promotion and tenure committee meeting, when English wanted to promote another post-modernist, he brought along a tape recorder and played Cole Porter's "Anything Goes."

Another outdoor issue was public sculpture. At the behest and from the pocket of a Trustee, Jared Cohen, the President, had a pole with plastic people walking up installed at the entrance to the campus. He had seen a temporary installation of the same at Rockefeller Center, and liked it. I thought, and think, it was pure kitsch. Worse, it reminds me of the Heaven's Gate suicides. More than my aesthetic distaste, I despised the intellectual agonies in its favor put out from the Art Department. In addition, Cohen had arranged with anonymous Chinese business men to have a statue of the first doctoral graduate of Carnegie Tech, Mao Yisheng, installed outside Baker Hall. There was to this time no statuary on campus. Herb Simon had refused to allow a statue of him to be created and installed. But we had this kitsch, with

accompanying intellectual fakery, and this statue to a guy who did we knew not what after leaving CMU, paid for by Chinese businessmen with unknown quid pro quo. (In fairness, President Cohen assured us that they had given no money to the university except to fund the statue.) I was not happy. After I read about Mao Yisheng's career, I was still less so. Mao went to China as an engineer building railroad bridges. He was eventually promoted to Director of the Railroads, succeeding a guy who left to go to work for the Nazi's. Just what Mao Yisheng did after Mao Tse Tung took over China is unclear, but it seems likely he was running the railroads that carried the Red Guard around the country to beat up intellectuals. So I wrote a pretty harsh criticism of the sculpture projects in the faculty paper, not to any avail. The damned things are still there.

The Head of the College of Fine Arts was displeased with my opinion piece and proposed a debate. Naturally, I accepted. But she did not debate—she pulled in a ringer from Pitt, whose name I have forgotten. His argument was chiefly that there are campuses with worse art than ours, and he gave illustrations. Yes, and there are worse meals than liver and lima beans, but I don't order liver and lima beans at a restaurant. After the debate I went over to shake hands with Head of CFA, whom I had never met. She refused. I think if she had thought I lost the debate she would have pumped away. She soon left the university, although I think not to George Mason.

I had one other engagement with Fine Arts. Some of their undergraduates went about naked at one of the Carnival events, and the university proposed to punish them with suspensions and such. The arts faculty wrote a letter of protest and, for reasons unknown to me, asked me to join in signing it. The letter was a run-on, free-association, incoherent mess, but I signed it, because I thought the students ought to have been given a lecture on courtesy, not suspended. About that, and my irascible disagreements with the IRB, the University Counsel, Mary Jo Dively, came to see me. Mary Jo can persuade anyone of anything, even persuade me not to write a furious letter to the IRB folks. We became good friends.

So, on the first of September of this year, I leave the department and the university. with some regrets. One is that I was never able to effect a transformation of our undergraduate required curriculum in Humanities and Social Sciences, which I think is remarkably worse than that of universities with which we would like to compete, Harvard, Princeton, Brown, Cornell. Work on revision of the curriculum has been going on for over three years, to little effect I know of. Peter Spirtes is one of the geniuses of the university. I very much regret that he has not received a University Professorship. I had obtained letters of recommendation and was about to nominate him when I was deterred by the Head, who had another candidate.

The department has a distinguished, energetic faculty. It has an able, friendly staff in Jackie, Mary Grace Joseph, Rosemarie Commiso, Correy Dandoy and Jan Puhl. It is one of the world centers for mathematical logic and its history, with Jeremy Avigad, Steve Awodey and Wilfried Sieg. Kevin Zollman has become an eminence as game theory has entered into philosophy of science. The department remains one of the world centers for development and application of computerized causal discovery, led by Spirtes and Ramsey and our brilliant new colleague, Kun

Zhang, and supported by Scheines and Danks. It is prominently represented in medical ethics by Alex London, and in psychology and in ethics and artificial intelligence (among several other things) by David Danks. It has a very successful undergraduate linguistics program led by Mandy and Tom Werner. It is prominent in philosophical education thanks to Mara Harrell, and will become more so thanks to our brilliant new colleague, Simon Cullen. Kevin Kelly has become a widely recognized and profound mathematical epistemologist. Teddy Seidenfeld is the doyen of philosophy of statistics. The department has the highest per faculty citation rate in the country, and a grant portfolio unmatched by any philosophy department in the country—indeed, at a guess, over the last decade in excess of the sum of all grant funding of all other philosophy departments in the nation. It was ranked a few years ago by objective criteria as the ninth best philosophy department in the nation, a ranking that did not consider grant funding in humanities departments. Count that as it would be counted in the sciences, and we are first.

Upon leaving the Constitutional Convention Benjamin Franklin was asked what kind of government he had left the new nation. His reply: “A republic, if you can keep it.” I would like to say something of the sort, but it doesn’t quite fit. You get the idea.

Clark Glymour, May 10, 2019