

Overview of 2007 Interview of Marc Ross --

The 2007 Marc Ross interview started with a discussion of his youth, his background, his parents (both immigrants), his mother being a teacher, his father a labor organizer. He was born in Baltimore, then lived in various places in Massachusetts and New York. He went to high school in Massachusetts, and then moved to New York where he went to Queen's College and met Joan.

Marc describes his move to Chicago, a year in graduate school there, then going to Wisconsin and finishing up, as a fairly young man, in, in the early '50s, going then from, from Wisconsin to a fellowship at Cornell, and then to Brookhaven for a couple of years, and then went to Indiana University, then coming, in the mid-50's coming in the, early, fairly—mid '60s I guess, to, to Ann Arbor. Discussion a little bit of the work here, some discussion of his... other activities, namely the founding of a cafe, together with Noah Sherman, and also some comments on the famous theoretical physics dinner with a fracas, with the George Manupelli company. And I must say the Ross recollection there differs somewhat from what I've heard, but I'm going to tap other sources and see if we can get a coherent account. On the whole, Marc and I didn't exhaust the possible topics, but it was a satisfactory interview, all in all.

Interview begins

Ross: Both my parents were immigrants. My father, an Eastern European Jew, was from the Ukraine. He escaped from the Austro-Hungarian Empire and their pogroms, leaving in 1914 from Trieste to come to America. He was a conscientious objector during the First World War.

And then he... studied in what was called a "labor college", so it was a—something supported by some well-to-do people who were, who were radicals, I guess, in this country.

And in the early '20s, he spent a year in, in Brussels; he was involved in protesting the Sacco and Vanzetti trial, and he took some college courses.

My mother, who was from Brussels and had been involved in college political activity, met him there. They eventually got married, and moved to the United States (or perhaps moved to the United States and then got married here).

My mother was a worker and an activist student at the Free University of Brussels.

Now, Belgium is split between Catholics and, I suppose, freethinkers. Her experience there led my mother to remain an anti-Catholic for her whole life. When I asked her about that, many years later – not long before she died– I was really surprised because it isn't something that you hear about a lot in the United States that much. But in, in Belgium, it's an issue; you're one or the other! [chuckling] She never really changed in that respect.

Ross: Actually, both my parents were, were radicals. I didn't have to rebel

Zorn: You came by it honestly! [laughing]

Ross: I didn't have to rebel or anything like that. But my father did change as the years went by. He became rather conservative as an old man, but my mother didn't.

Zorn: Isn't that the old cliché? "If you're 20 and you're not a Communist you have no heart, and if you're at 50 and you're still a Communist you have no brains?"

Ross: That's right. I think that's, in that case absolutely right.

Zorn: What did your father do?

Ross: He was a labor organizer for the International Ladies Garment Worker's Union, the ILGWU.

Ross: And now, looking at it now, later on, it was an excellent union. It had some similarities to the United Auto Workers, in being interested in social issues. The rank and file of the ILGWU, aside from the pressers, were all women. But so many of the staff and organizers were men that this union was a rather paternalistic organization. When I was young, I occasionally went with my father to some of these garment factories.

Zorn: Where did you live?

My father worked mainly in New England. His main office was in Fall River, Massachusetts. My parents were unusual, and I don't know how happily married they were, to tell you the truth. They lived separately a lot of the time. My mother was a teacher at a couple of boarding schools in Dutchess County and Westchester County. So when I was young, I lived in either suburban New York or in New York City itself.

Zorn: Where were you born?

Ross: I was born in Baltimore in 1929, and an interesting factoid is that the famous Doctor Alan Guttmacher (https://en.wikipedia.org/wiki/Alan_Frank_Guttmacher) delivered me. His signature is on my birth certificate, but I never had any contact with him later.

At that time, my father worked at what he called a "boiler factory"; I assume it was a manufacturing facility involved with the Chesapeake and Ohio Railroad.

When they were in Baltimore, my father was already becoming active in union activities. They soon moved to North Carolina where they attempted to organize the textile factories. This was in western North Carolina, not so far from where Virginia Tech is now located. I'm now forgetting the name of the town where we lived; we were there for a year or so. I recall a certain amount of violence . . . and actually Fall River was not entirely nonviolent either.

They then moved to New York City for awhile, and I lived, as a young child, in Queens for a couple of years. Then my mother got this job as a teacher at a boarding school, and I moved to that boarding school.

Ross: And then a couple of years later, they bought a house Rehoboth, one of the poorest towns in rural Massachusetts, close to Providence RI but relatively far from the cultural life of Boston.

We lived there at that country house during the early years of the Second World War. But my mother was bored stiff; you know, she was a European and somewhat of an intellectual even though she was not a college graduate. For her, rural Massachusetts was a wasteland.

Rehoboth did not have its own high school, so I went to high school in Dighton, a town about ten miles away. There our science teacher told us that there were wall paintings, —someplace in the United States—showing that dinosaurs and people co-existed. I studied physics with him, and as you might imagine, it wasn't much of a physics course.

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Zorn: We have some fixed dates here...you were born in 1929, graduated from Queens College in 1948, so it would be a reasonable guess that you were in high school from 1940-1944

And so I was in high school when I was 14 and 15; I was very young. Perhaps that was because I was smart, but perhaps it was because I had been in these progressive boarding schools for a few years. These schools operated on a tradition influenced by John Dewey and other philosophers; they had a somewhat radical attitude toward teaching. My first progressive school had a farm, and I helped take care of the chickens, you know, cleaning the coop and collecting eggs. I have a clear recollection of the time when a pig was slaughtered,—and when chickens were slaughtered — I had some trouble dealing with that.

Ross: In Dutchess County there were some interesting people. One of my friends, James Stevenson, —somebody I haven't chased down, but he's an, he's an elderly cartoonist still working for the *New Yorker*.

[\[https://en.wikipedia.org/wiki/James_Stevenson_\(illustrator\)\]](https://en.wikipedia.org/wiki/James_Stevenson_(illustrator))

I was there for a number of years. We then moved to live in Providence, Rhode Island the year my sister was born; I think they wanted to be living in a city for that. They then returned to this progressive school, and then we moved to another progressive school where she was also a teacher. This second progressive school was actually a largely Communist school though my mother was not at all a Communist. The school seemed to be a collection of pro-Communist and anti-Communist radicals as teachers and parents. I remember stories of the conflicts that arose from these differences.

Beginning of interest in science

Ross: Fortunately, at that second school, there was a young teacher, George Dillman, who interested me in science.

Zorn: And this was in your eighth grade, before Rehoboth?

Ross: That's right, it was eighth and ninth.

Ross: Dillman was really interested in science. We took hikes and we collected minerals. And we did some experiments with those chickens that I mentioned, for example feeding them paprika and showing that the eggs turned red! And some of the chickens were dissected as so that we could study their innards.

Dillard certainly generated my interest in science. And by the time I got to college, I thought of myself as doing engineering or science, even though nobody in my family my circle of or relatives any involvement in science.

Zorn: So you graduated from high school at age 15 right in the middle of the Second World War?

Ross: That's right. So I was too young to go into the Army. And at the time of the Korean War, I was already a graduate student, with some better things to do, so I never did serve in the military.

Probably just as well, because I'd had all this radical training, where we didn't salute the flag and so forth, and I might have had an awkward time, I really don't know.

Queens College

Zorn: Did you go to college immediately after graduating from high school?

Ross: That's right. My mother talked to some people in the New York public school system and arranged for us to meet with some counselors. One of them recommended that I go to Queen's College, now a branch of the City University of New York, which was tuition free at that time.

Zorn: Did you live at home and commute? That one must have been quite a common pattern for Queen's College at the time.

Ross: Yes, Everybody was a commuter there; there were no dorms. Most of the students lived in Queens, but I didn't; I lived in Manhattan because that was where my mother was teaching.

Ross: We lived at Third Avenue and 89th Street. Next to the Rupert Brewery. I commuted on the Third Avenue rail and the Independent subway.

Ross: And... it, it was wonderful. You know, I, I, now I can pick up on that; I tell people how wonderful it was to live in Manhattan at that time. Just, just fabulous. There was no—nobody talked about risk, about risks, or about theft, or whatever. You could just—as a boy, at least, I could go wherever I wanted to. And if you were hungry, you go into a bar, and in Manhattan the rule was that—or maybe New York City it was—the rule was, free food was available on the table. You know, it was things like baked beans, and so on. And salad.

And so, I did that, I, even though I wasn't of age. The age was 18 at that time, it wasn't 21, as, as it would be now. [pause] So... so I went to Queen's College, the physics depart—I thought I would become, I went into pre-engine—I thought I was going into pre-engineering and I would move to City College, as a, as a junior. But people advised me—

Zorn: Oh, you moved from Queen's College to City College?

Ross: No, that was the plan, but I didn't. I grew to like Queen's College, in spite of the commute; and moreover people advised me not to transfer. They said, "Well, the education here is good." And I, and I... and I agreed with that. It obviously wasn't a sophisticated physics program, but there was this guy, Edmund Thorndike, and I'm not sure about his first name, because he was a son or a nephew of, of a Thorndike who was an important educational philosopher at the time.

And he was a very good teacher—some of the other people were not particularly good, but he was a very good teacher. He would walk into the room in the morning, and in one corner he would write, " $F=ma$." On one corner of the chalkboard, and we would go from there. [chuckling]

And almost essentially the entire fall semester, that's the way it worked. So that was very impressive. As time went on, I helped with the lab equipment and so on. And...

Zorn: This was a bursary job of some sort?

Ross: Yes.

And I took—as colleges were in those days, there were a lot of required courses. So I took... required courses in architecture, in... languages of course, but in, but in, you know, sociology, and... and some of those courses were very good, I mean, I really... the sociology was not, I never took to that.

[chuckling]

But, but the art, and architecture, and the music—I, I thought, my, my impression was, that the music teacher was somebody quite extraordinary. And—

Zorn: It could, could be! I mean, you find extraordinary people teaching in... in extraordinary—in special place.

Ross: Well, Joan has told me, that there were a lot of... extraordinary people in her high school, her public high school... in, which was in Queens.

I met her when she was student at Queens. And apparently, a school like that, because of the Depression, and the... general... background, I suppose, of people in New York City, had a lot of extraordinary teachers.

Ross: So... I had an extraordinary teacher in school. My mother was a third and fourth-grade teacher, and she was, she was, excellent, as far as looking back, I would say she was excellent. We did projects, and, and... I did all kinds of projects, and we visited—now I'm going backward—we visited an egg factory in connection with our... chicken activity.

And we learned how District Attorney Thomas Dewey, who became the, the—

Republic candidate for President in 1948 maybe it was. Anyway, we learned about how they dried eggs, and we learned how they got, went after—the Mafia of those times; it wasn't the Italian Mafia at but it was, maybe a Jewish Mafia or some other Mafia like that.

And... so we did, we did trips, and, and projects, and that of course reinforced a rather vague general idea of... of my being interested in science.

Ross: [pause] Let's see if there's anything else particularly about... I met some, some people who were, you know, were active—were somewhat intellectual and active in, in... left-wing politics. I, I couldn't... resurrect their names without giving it a lot of thought. And, and then, at Queen's College, it wasn't particularly like that; I mean, these were—it was an ordinary college.

For a, for a city, for a New York City college. People weren't radicals; there were a lot of, there were a lot of Jewish boys who found that they couldn't go on to medical schools, because in those days here were quotas! That really shocked me when I learned about it.

Zorn: Did you know about those quotas when you were in college?

Ross: I learned about it, in my later years in college, from talking with pre-med students; this was a big topic for medicine and perhaps also in law. It wasn't an issue in physics; physics students didn't have to worry about that, I guess. I never inquired.

University of Chicago

Ross: So I moved from Queen's College to the University of Chicago for graduate school.

I can drop some names, but nothing really unusual happened.

I was at Chicago for a year and took classes with Gregor Wentzel and with Teller.

I didn't actually take Fermi's class, but there is a motion picture of Fermi lecturing to a huge audience in which one can see Joan knitting. She was already at Wisconsin, but she was visiting me at that time.

I took the prelims at Chicago and did very well, but I did not enjoy being there. It was not such a happy situation at the University at that time. It was too crowded.

Zorn: So this would, must have been around 1950? '51, something like that?

Ross: I think... I think was more likely to be '49.

Move to Wisconsin

So then I moved to Wisconsin, because Joan was already there as a graduate student in Math. We got married. So it was—Heinz Marshall asked me if I'd like to work in his group. But I soon realized that you can't be as disorganized as I am and still be a good experimenter.

Zorn: I'm not sure about that. Have you ever seen Fred Hendel's office? Or Fred Becchetti's? They are successful experimentalists!

Ross: I guess, you're right. [laughing]; maybe there are exceptions that prove the rule.

Ross: Anyway, of, of course I loved Wisconsin. It was friendly and the other graduate students were interesting. And so I was one year in Chicago and three years in Wisconsin. I got my degree with Bob Sachs. And since then I've had to explain to a lot of graduate students that you don't have to write an important thesis [chuckling]. My thesis, on something Sachs suggested, was really quite quick and routine.

And, and then I wanted to say how young I was, because that plays a role in the next story, which was going from Wisconsin with my PhD to Cornell, and... on a... [long pause] on a... an NSF... fellowship, I guess it was NSF.

Cornell:

Zorn: What year was that, then?

Ross: That was then... '52. I was 23 years old; I had a quick PhD.

Zorn: Nothing wrong with that!

Ross: No. No, that's absolutely right; there's nothing wrong with that. I really think that we've let the length of PhD studies get out hand; well, I'm hardly the original... person thinking that.

Cornell was interesting, of course, because Han Bethe was there, and you know, he was—I, I was... sort of assigned to him, and I would go into his office, and there was a stack of blank paper on one corner of the desk and a stack of paper with writing on it at the other corner, and there was a wastepaper basket with some crumpled pieces of paper, and that was it! The table was clear!

Zorn: Now weren't those were the days when quantum field theory was struggling with renormalization questions? And Freeman Dyson was there.

Ross: Yes, but I wasn't involved in that somehow. I wasn't really enough of a theorist to, to really understand what was going on, so again, did some fairly routine stuff.

Ross: One thing about Wisconsin was the level of engagement at their colloquium and coffee hour. Everybody was there! Now I don't want to say anything negative about Michigan, we haven't had this here in recent years. We do have coffee hour, but I'm not there, but I think a lot of other people aren't either.

It's a different world. And I think that... you know, I'd—it, it's, it might be, or I feel, at least, I'm too busy. I'm, there's too much pressure on me. And I don't feel that particularly now that I'm retired, but I felt it when I was... still active, and we kept on hearing... from... from the powers that be, at the University of Michigan, that we had to do more. And that's the way I, that's the way I would summarize it. And, and so the, that, atmosphere at Wisconsin, was not, didn't, didn't, really, was not here.

Ross: I can't say, maybe, maybe it was when I first arrived here, I don't really know.

Zorn: How long did you stay at Cornell?

Ross: I was just there for one year and then I went to Brookhaven for two years.

NEEDS WORK Brookhaven

Zorn Okay. What kind of things were you doing at Brookhaven?

Ross: Well I was, in the, in the... building with a corridor, where... where Frank Yang was there, Bob Mills—we, we, we shared an office.

And also... who's the Nobel Prize winner at Cornell—at SLAC? [snapping fingers]

He's... he was the director at SLAC, and he's been on—we, we're both, we've both been on the... the, on POPA, and he's on, I think he's on the... Physical Society's... council.

And, it was a so—you know, looking back on it, it was sort of startling. He was a, he was very young—he was younger than I was—and he was... it's sort of amazing, looking back on it. I mean, he, he, he read the... stock market, and the horses, and, and then he did some stuff at the Cosmotron, and some kind of, some kind of experimental stuff. But—

And, and now, he's a very, a *very* sophisticated [chuckling] administrator and... policy person, and it's, it's just sort interesting—

Zorn: Is this Burton Richter?

Ross: Burton Richter, yeah.

Ross:

And it's sort of interesting to see how... people mature in that respect.

He had, he had done a three-year PhD at, at MIT.

And... and, you know, that isn't *all* good, I mean, it meant that the people that met him after he first got a degree were just sort of startled at what a... an unsophisticated person this—not in physics necessarily, but more generally—and now he's, he's of course a, he's been a power in Washington, and of course at the labs, and so on.

Zorn: Was Rudy Sternheimer there at Brookhaven when you were there? [laughing] He used to greet me at every conference with "Hi, have you quoted me in your latest work?" [laughing]

Ross: [laughing] Yeah, well, Rudy was, Rudy was... Rudy was a good guy, in my opinion. [pause] Oh yeah, here's Burt Richter's name, I, I put it down here so I wouldn't forget it. [pause] Yeah, of course... Alan's associate... [snapping fingers] Maurice Goldhaber, and his wife, were, were at Brookhaven.

There were, there were quite a few very, very good people there. It was...

That was the mid-50s then?

Yeah it was... it was the... early to mid-50s. That's right, it was the mid-50s.

The move to Indiana

Ross: I think I went to Indiana in '55, so it was '54... and '53, or late '53 to early '55. Actually it was hard to find an academic job in those days. I was worried. But Hans Bethe mentioned my name at a talk in the Physical Society, and he must have written a letter too.

So I got a job at Indiana University, and that was very nice. Roger Newton and Don Lichtenberg were there, and they are very good physicists. Roger Wilkinson, the cyclotron man, was there and he was a lot of fun.

And there was ... [snapping fingers] the... astrophysicist who recently died... a, a great guy. [sigh] I've got this... problem with names. He was a very fine physicist; played a heavy role in... in the administration, the funding of—of astrophysics. He gave me some tennis lessons, and that was wonderful. I realized, "Gee, if I wanted to play good tennis, I could take lessons with this guy." And, but I didn't have time. I—.. we were having children, and I was—I felt, I felt at least, very short

of time.

Zorn: As I recall, both Roger Newton and Don Lichtenberg were established there, and you were probably being brought in as a new edge in theory . . . and that carries its own responsibility.

Ross: No, I think they had not been at Indiana all that long before I arrived.

Zorn: Was Allan Mitchell chairman at that time?

Ross: Yes, he was the chair, and I was immediately made a fellow of the American Physical Society because that was Allan C.G. Mitchell's policy. [laughing].—he took care of that.

Zorn: Mitchell's daughter [Alice Rivlin, economist] has been quite prominent in the government.
https://en.wikipedia.org/wiki/Alice_Rivlin

Ross: Yes, of course. Mitchell and his wife Georgianna used to have a departmental party each year, and from I learned that you should allow the cheese to warm up before you serve it. [chuckling] And that was a good thing to learn. Allan Mitchell had a heart attack while walking near his house, and, as I'm told at least, people immediately ran to him, lifted him up, and helped him walk into the house. Of all things to do! But of course people didn't know better in those days. So he died (Nov 7 1963 at age 61) from that heart attack.

Digression –Pavley Bill

—[phone rings]

I've just been involved with these lawyers who are pursuing something called the Pavley Bill. Fran Pavley is in the California legislature. A very, very smart woman who works on environmental issues. There were hearings on her bill and, as someone who had been a consultant, I was asked to testify at those hearings, Anyway, I found that testifying is not the same as teaching physics! [laughing] I tried to explain things while on the stand, but my lawyer said, "don't bother with that; 'no comment' is what you should be saying". A bit later she did say, "there are a lot of good things in your testimony" which reassured me a little bit. I needed that because I felt that I had let them down, that I hadn't known how to behave myself.

Zorn: Yes. It's a different world in the legal arena.

NEEDS WORK Moving from Indiana to Michigan

Zorn: When my father left UCLA to come to Indiana in '46, that was considered a step up in the world of mathematics. How was Indiana physics rated in the 50s and 60s?

Ross:

It's hard to say, I think they were not rated that highly. Wisconsin, Illinois and, and Michigan of course, and perhaps Minnesota were more highly rated in the Big Ten. Indiana was a good place for me at the time, When I first went to Indiana, I had my nose to the grindstone.

I still wasn't sure whether it might be possible to get a Nobel Prize. And, and I... I'm not entirely... facetious about that, I mean— A young person doesn't know.

Earlier, when I was at Brookhaven, I had meet Frank Yang, Burt Richter and other very good people. I gradually learned that I wasn't going to get a Nobel Prize. But at Indiana I was still working very, very hard...long hours, and Joan complained.

Don Lichtenberg and perhaps some others were commenting on my work, pointing out that Gell-Mann was working on similar problems, and of course I knew that competing with Murray Gell-Mann was difficult. So—

Zorn: Did you feel you were crossing swords with him?

Not really, but it was another reality check.

Then, with some people at Indiana, I began looking at public policy issues. I didn't do anything very special, but we began talking about those issues. And then I realized, you know, that I was drifting away from physics a little bit. Later, when I came to Michigan, I again devoted all of my energy into physics. But after three or four years, I crept back to spend at least part of my time on public policy.

but I accepted the offer from Michigan because it had a higher reputation and also because there was an outstanding experimental group here. This was particularly important because I was then establishing myself as an advisor on experiments at laboratories and on accelerator program committees.

And... so when I came here, I wasn't prepared to... I wasn't preparing to abandon that, but I felt, you know, I could be a little bit more mature, perhaps.

Ross: But I did feel I was doing something significant as an advisor to experimenters and as a member of, of the Argonne program committee.

So that was... something I really enjoyed and felt I was doing a good job at.

Ross: So... so that was worthwhile.

But there was an event in between there, aside from the birth, birth of my children.

I had a remarkable experience in going to Italy in the fourth or fifth year of my tenure at Indiana. Joan and I with the children visited ancient Italian sites, we studied Italian, we visited Roman sites. It was really quite amazing. That time in Italy helped me in making conceptual transitions both at Indiana and, later, at Michigan.

NEEDS WORK Career directions Indiana and UM

Zorn:

Do you... have the feeling that... in a way, when one... works professionally in different areas... that it's sort of like finding the, the weaker spots in, in an, in a, an elastic[?] envelope or something like that? Where, there are a certain places where, if you push hard, you realize, I could work a lot harder, but I'm not gonna get... this far, but there are these other places where I can make more of a difference by pushing, maybe, you know, speaks more to your talent, or the, to the needs of the society at the moment, or, whatever?

Ross:

Well, that's right. Actually, I had found... a... an approach to physics already... maybe even at... well, maybe not at Brookhaven, but certainly by the time I got to I, IU; part of it was that Roger Newton, and... Don Lichtenberg were both interested in scattering theory.

And I... realized gradually as I worked in that field that... I... that it wasn't as... it wasn't quite as... fashionable as other areas of theoretical physics—of high energy, high energy theory—and I, and that really agreed with me. And I still tell students, you know, when I occasionally talk with students... these days still about what they should... be doing, and I said, "Well, you know, you really oughta think twice about working in a field where there are one thousand other theorists."

"And only half a dozen problems."

Ross:

And so I, I started—I, I responded to that... already in, in my... maybe not right away at Indiana but when I was at Indiana I responded to that, and started... doing... things that I felt were my own... areas, rather than... working... I guess I was struck when I was in Europe, I was struck by a visit to CERN. In, incredible! The, the theory group at CERN?

It's incredible. I mean... crowds of people talking, all talking about the same problem!

Ross: And that wasn't what I had... that's not what I had learned with Sachs at all.

And... it still doesn't make any sense to me.

Zorn: I understand what you're saying about that. You want to make a difference.

Ross: Yeah. That's right. And you realize that making a difference when there are... hundreds of other people working on the same problem, it, it, it, just isn't likely.

Moreover, you get this sort of feeling—which might just be sour grapes or something—that that kind of intense pressure doesn't... doesn't necessarily mean good physics.

Theorists at Michigan

Zorn: At the time when you came here, it was my sense that we did not really have a leading theorist. Of course we had senior people of real distinction: David Dennison, Otto Laporte, and Ken Case. But David and Otto were in the last years of their careers, and Ken was doing his own highly formal work. But we needed someone to lead, to guide the young people, to attract new blood. And then you came in to meet that need.

Ross: Well, yes; that's true. I don't know how successful I was, but I worked at it. We succeeded in bringing in some promising younger people. I worked with Leo Stodolsky who was then a postdoc; he was very good; I enjoyed working with him. I tried to persuade him to stay, but he had better offers elsewhere. He went on to a wonderful career in Europe --- he was the director of the Max Planck Institute in Munich for many years.

And Frank Henyey was here; Frank was very smart and I was very disappointed when that didn't work out. Now whether he was going to become a really good physicist was hard for me to judge, but he was a very smart theorist.

Zorn: How about Bob Cahn?

Ross: I knew him, of course, but I didn't interact with him that much.

Ross: Gordy Kane came here not long after I arrived. I enjoyed working with Gordy, but for a while I wasn't sure how things would work out for him. Then he became a very, very able theorist.

Zorn: He attracted some very good students.

Ross: That goes to show that it's hard to make definitive judgments of young people. [laughing] Some really strike you as wonderful—and they may be—but they're not necessarily going to become important physicists.

Zorn: Yes. But there are different dimensions to becoming important, and beyond raw ability there are self-assurance and self-promotion. You can't be too bashful in this business.

Zorn: It was quite a step when Sands was able to recruit Tini Veltman.

Ross: Right. Well, I actually appreciated Veltman. He came when I was in transition between particle theory and energy studies. On more than one occasion, Tini came around and said, "I admire you for doing something different." And I said, "Well, thanks. I thought I might make more of a contribution by changing my focus. I'm grateful for your support."

Zorn: Well, you know, from Tini – that's quite positive compared to what he's said to lots of other people!

Ross: [laughing] That's right, he certainly wasn't lavish with his praise.

Bob Williams

Ross: I should mention another person. And that's Bob Williams. He's just an extraordinary person, someone I really admired. I learned a lot from the fact that he was not able to get a permanent position at Michigan, because he was not doing "the right kind of work" and didn't really fit in Department X or Department Y.

Of course I also learned the same thing about hiring when I was director of the Residential College, but this issue about Bob was different because I had a personal stake in it. Bob was a wonderful person to collaborate with. I still talk with him from time to time.

Zorn: Is he still at Princeton?

(<https://www.princeton.edu/pei/energy/people/staff/williams/>)

He's at Princeton, but not on a tenure track. He's an important person there. He brings in a lot of funding; he works with and inspires young people. But I believe that he wanted to leave, to move to Colorado to be with his... I think it's his son... and his son's family; his son or daughter, I'm not sure I've got it straight. I don't know how or whether he was able to arrange it with Princeton and University of Colorado. And it's, it's ridiculous, really, because he's one of the most inspired environmentalists around.

One of the difficulties may have been his intense focus on his own projects, on his own work. It makes committee meetings difficult if more general matters are to be discussed. It's very, very worthwhile paying attention to his work, but of course if you are hiring a full professor, you hope to get somebody who can be a senior advisor who pays attention to the problems on which other people are working.

Zorn: Yes, there are some very good scientists like that.

Ross: Anyway, I really enjoyed working with Bob; we wrote a book together. I recall that you took the photo of me that we used on the book jacket.
and—

Extracurriculars-The Coffee House

Zorn:

Well, I remember that you were also involved in lots of other things, often political. For example I remember that a group of us read Barbara Garson's play "MacBird" aloud, one evening in your home on Martin Place. That may have been the first time I had understood your devotion to politics.

And you started a coffee house!

Ross: One of my proudest moments! It was with Noah Sherman, you remember him . . . he moved to Berkeley when Pauline, his wife, took a position there . . . after moving to California, he went to law school, passed the bar exam, and did lots of pro-bono work. He died not long ago.

Anyway, Noah and I talked about creating this this coffee shop, but you know, that was another case where... either you throw yourself into it, ... or you don't contribute much. And... I didn't throw myself into it; I didn't contribute very much, and it wasn't very successful.

Zorn: But it was important while it lasted: you created a venue where politics and public affairs could be discussed by serious members of the university community. This was long before there were any other coffee houses in Ann Arbor. I remember that going there (the few times that I did) made me feel very much a member of the avant garde. The young faculty were still wearing ties when teaching, so it was exciting for them to see you, a senior professor, breaking away from perceived constraints. And in your coffee house there was music! And a sense of freedom! We could feel ourselves as poets, putting our toes in the water of the left bank!

Ross: [laughing] Well, that's nice of you to say that. But, as I said, it wasn't very successful.

Zorn: I guess that establishing a business does not come so easily to academics. Peter Franken, John Mersereau, and several others tried to start a fancy French restaurant down on Main Street, but again it became clear that for these enterprises to succeed, somebody just has to put their chitlins into it. And it's very hard to do that and keep the rest of your life going.

Ross: That's right, that's right. That's certainly right. I felt overextended, and that's a polite way of saying it. But it was fun to try.

[The book "How to Grill a Gourmet" by John Mersereau describes the rise and fall of the La Seine restaurant in Ann Arbor]

Residential College

Zorn: You remember the time when Jim Robertson stepped away from being director of the RC. He had been director from its very beginning in 1967 and the LSA administration somehow thought that six years was enough, that the college should have a new director. So they appointed Lou Orlin who started out in the summer of 1973. But serious personal issues arose for him, so just after the start of fall term, Harold Shapiro, chair of the RC oversight board, asked me to take over. One of my jobs was to find a new director to begin in the fall of 1974. Your name quickly rose to the top of the search list.

Ross: Yes, well – it was, it was okay. I thought it was not so unreasonable for me to become RC director, which of course was your fault.

Zorn: [laughing] Yes. I'm grateful that we're still friends after that.

Ross: I did a couple of good things there, and —but I didn't really throw myself into it. But I had a certain amount of good sense about what to do, so I think it was okay, but it's hard to really know.

Midwest conference

Zorn: I wanted to ask you about the Midwest Theoretical Physics Conference that occurred before your tour in the RC. What went on there? What was the real story behind that?

Ross: Well, it was an ordinary theoretical physics conference and, as usual for conferences, we planned to have a banquet. And, at that time... well, Gordy Kane and I were involved... or, well perhaps I shouldn't associate him with it because he was not tenured at the time. Anyway, Joan and I were somewhat involved with the so-called ONCE group.

Zorn: George Manupelli's group?

Ross: Yes, although I'm not sure I ever met him as such; I must have met him. But the architect... and his wife, and us... I'll think of his name . . . he was an professor here of architecture, ... he and his wife were far out in the art scene. He lived on the corner of Wells, down toward Packard ...I don't exactly recall. And... they were pretty far out. I'd say I was in way over my head.

Zorn: [laughing]

Ross: And... so we decided to ask them, to provide an experience at the theoretical physics banquet. It turned out that they did something which annoyed a lot of people. Some people thought it was okay; it was, you know, modern art. But they had decided to have, I'll say, three television sets, running simultaneously at high speed—they were going through maybe a weekend's television on each one during an hour.

And you could sort of follow it if you looked. There was a lot of noise.

Zorn: And this was put up then just for people to watch?

Ross: Yes. And then one of our faculty members really got angry.

It's probably inappropriate for me to name this guy, he's still someone I say hello to. And you probably know who it is. Anyway... so he attacked these television sets. [pause] Now that I think about it, they were probably not televisions...they must have been regular movie projectors.

Dennison and Crane

Ross: And... so... after, ... when that evening was over... let's see... let me mention this, because its right to the point of something I said a moment ago... Dick Crane said "Don't worry about this; it will be OK" But Dennison said, "I hope you're satisfied!"

Ross: And that sums up my opinion I had of both of those people. Dick was fantastic, but for whatever reason, I didn't get along with David. He may have fallen into it at a certain time —and he was a good physicist. Once, in July, he met me on the steps of Randall and said, "What are you doing here? Why don't you have a summer place up on the lake somewhere?" And I thought, "Well, that's very nice to say, but (A) I've got too much work to do, (B) I don't have very much money."

I already had reservations about David from the time that I was on the departmental executive committee.... I hadn't been impressed. I mean, those were times of casual management. When Parkinson said we should do this... and that's "quote, unquote", that was the end of that discussion; David just went along.

On the other hand, Dick was a fantastic person, as well as being a fantastic physicist. He kept doing interesting things over his entire career, even in his old age. And how many of us can say that? He was quite extraordinary. One of these days I hope to see a big building named for Crane here on the Michigan campus, as well as over at the Washtenaw Community College.

Zorn: Yes. I've thought for a long time that we should just have an internal policy of everyone calling this [the Randall addition] the Crane building. You know, [chuckling] just do it by fiat. Let the regents deal with it afterwards!

Ross: That's a thought. That's a good thought.

Kane & Conference

Zorn: And Crane told you not to worry about the incident at the banquet?

Ross: And that was a day or so afterward when I was worrying about it.

Zorn: Gordy didn't have tenure then, so he must have been worried also.

Ross: That's true! [laughing] That's probably true, yeah. That's right. Yeah, it was... we were... we decided, we talked about it, we saw, thought, you know, it was...

I suppose it was irresponsible of us to arrange something which might really offend people. [pause] Actually, part of the problem came because the country club [the banquet venue] was being paid according to the number of liquor bottles they sold. They were pushing liquor without the soda or whatever one would usually have. Gordy and I learned this only after the fact.

Zorn: Oh, so they just put bottles on the table or something like that?

Ross: No, but it was an open bar where they served anyone who came up; they poured very stiff drinks. And this was... I mean, there's no reason to think that this crowd that could handle that, and they certainly, ... certainly couldn't. So that was bad; we should have gotten some advice before getting into something we didn't know about.

Ross: Anyway... and, of course we've heard wonderful reactions to that event from Asian physicists: "This is what Midwestern theorists do?"

Zorn: [laughing] That's what they do just to blow off steam!

Ross: [sighing] Yes. [pause] But there was a period of time when we felt pretty badly— when the ONCE people said that they were going to sue us, and... so at that point, Dick's remark really helped. It really, really helped.

High energy physics-future; son Chris

Zorn: I hope we could talk later about what you see as the future directions in high-energy particle experiments. Many of those physicists are contemplating serious changes in that sort of work, with larger and larger teams working on gigantic accelerators.

Ross: Yes, Larry Jones and Mike Longo keep me up-to-date with stories about that.

Ross: Well, of course, I have one particular insight about that. You know, my son Chris, who's called Marc in his working environment, is an assistant director at Fermilab. I talk to him.

[in 2016 Marc II is at SLAC as LCLS-II cryogenics systems manager. Marc Ross 650-926-3574 mcrc@SLAC]

Zorn: So people in the future are going to think, "Marc Ross . . . my God, he had a long career!"

Ross: [laughing] True, true. Yes. He's a very interesting person.

I was impressed when he wrote his thesis at Northwestern; he... he was a much more mature physicist than I was at that age, and I don't know—well I was young.

Ross: And maybe that was the problem—

Zorn: You mean at that stage of his academic career, when he got his PhD, he was more mature. But he was older.

Ross: But he was older, that's right. So I'll... I'll say he was older, and that, and that... I guess that's one of the themes that I would... that I would have I was... I was very young and immature. Being young helped me, because I got fellowship when I got my PhD. From casual conversations later, I got the distinct impression that they gave me that because I was so young.

Items not covered

Ross: There are some things we might talk about that don't involve the department so much.

Zorn: Can we just list them as reminder for next time?

Ross: I've been involved with environmental organizations in Washington, particularly; that's been a major occupation.

And I'd like to talk a bit about Art Rosenfeld. He was a Berkeley physicist who left his position there, in effect, although he had a position at the national lab.

And I spent a lot of time at Argonne. So I could talk a little bit about, about national labs.

2004 Leo Szilard Lectureship Award Recipient

Marc Ross 2004 Leo Szilard Lectureship of APS

"For his many rigorous, elegant, fearless, and influential analyses of the automobile's energy use, emissions, and crashworthiness that have inspired two generations of policy physicists."

Ross received his B.S. at Queens College (1948) and Ph.D. from Wisconsin (1952). He was assistant professor to Professor of Physics at Indiana University, 1955-1963; and professor of physics at the University of Michigan since. He nominally retired in 2001. His dissertation was with Bob Sachs in nuclear theory; and he worked in particle theory and as kibbitzer to experimentalists until 1972. During those two decades he enjoyed NSF postdoctoral and senior fellowships (Cornell and Rome), and work at Brookhaven and Argonne. He helped organize the 1974 APS study on efficient use of energy, and, in collaboration with Bob Williams, began work on energy and environmental issues. His initial focus was industrial energy use. Since 1988 he has focused on automobiles. Much of his research concerns fuel-economy technologies. He also analyzed emissions of in-use cars and created a model of emissions and driving patterns. Recently he has studied relationships among traffic safety, vehicle mass and other variables with Tom Wenzel at Berkeley (LBNL) in order to evaluate safety effects of potential changes in vehicle design. He has also enjoyed long associations with the Ann Arbor Hands-On Museum, and American Council for an Energy-Efficient Economy

End

Zorn: Well, this has been great; thanks for the conversation.

Ross: Well, I very much enjoyed the opportunity to think about these things that we talked about.

I certainly appreciate what you're doing, and what you've done; I don't just mean this, I'm also referring to your sculptures outside of Randall and to your writing that book on the history of the department. All that lets people have a different take on you.

Zorn: Thanks; it's kind of you to say so.

Overview of transcript

The Marc Ross interview started with a discussion of his youth, and his background, his parents, his mother being a teacher, his father a labor organizer, both being immigrants. And then, his—he comments on born in Baltimore, then lived in various places in Massachusetts and New York, went to high school in, in Massachusetts, and then finally moving to, to New York and then going to Queen's College, where he met Joan; then, some discussion about his move to Chicago, a year in graduate school there, then going to Wisconsin and finishing up, as a fairly young man, in, in the early '50s, going then from, from Wisconsin to a fellowship at Cornell, and then to Brookhaven for a couple of years, and then went to Indiana University, then coming, in the mid-50's coming in the, early, fairly—mid '60s I guess, to, to Ann Arbor. Discussion a little bit of the work here, some discussion of his... other activities, namely the founding of a cafe, together with Noah Sherman, and also some comments on the famous theoretical physics dinner with a fracas, with the George Manupelli company. And I must say the, the recollection there differs somewhat from what I've heard, but I should tap other sources and see if we can get a another view [Ed Yao? Gordy? Harold Borkin (from the Manupelli group)]. On the whole we didn't exhaust everything at all, but it was a pretty, pretty good way of getting a feel for his background, and well, I hope to do more later.

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(Don't include this) Zorn appreciation for Michigan:

Zorn: I've always felt that our University has been a wonderful place to work and that I've been given every opportunity to do what I had it in me to do. And if there's anything I haven't done, it's been because of my own limitations, not from being held back. A few minutes ago we were speaking about choosing an area where one felt able to make a difference . . . where could one make a real contribution? I've had the opportunity to explore aspects of atomic and molecular physics, laboratory astrophysics, and applied physics; I've given these a serious try and made serious (if not spectacular) advances. I did several brief tours in administration. And I had lots of adventures in teaching, including a decade of taking students on freshman seminar field trips to Appalachia and, on the technical side, a long, successful run in teaching undergraduate quantum mechanics. And then, when those streams began to run dry, I was given the privilege to do sculpture and to write on our history. I feel very fortunate.

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