

Interviews of the Margaret MacVicar Memorial AMITA Oral History Project, MC 356
Massachusetts Institute of Technology, Institute Archives and Distinctive Collections

Regina Herzlinger – class of 1965

Interviewed by Kira Buttrey, class of 2023

August 11, 2021

Margaret MacVicar Memorial AMITA Oral History Project

Regina Herzlinger (BS Economics 1965; DBA Harvard, 1971) was interviewed on August 11, 2021 by undergraduate Kira Buttrey (SB Biological Engineering 2023) via a videoconferencing app. Professor Herzlinger was at her home in Massachusetts and Ms. Buttrey was in her apartment in Cambridge.

Professor Herzlinger immigrated to the United States from Israel at the age of eight. She studied at an Orthodox Yeshiva in Brooklyn, New York, through high school. She then applied to MIT given her love of science and the Institute's early history of admitting women. While an undergraduate at MIT, she studied economics and minored in biochemistry. She was frustrated by what she saw as the overly theoretical approach to some subjects, and by what she viewed as obvious sexism and misogyny, but was excited to study with such luminaries of economics as Paul Samuelson, E. Cary Brown and Richard S. Eckaus. Among her classmates was her future husband and business partner, physicist and inventor George Herzlinger (MIT SB Physics 1965 and PhD Physics 1972).

After working as a consultant to help pay off the debt Professor Herzlinger incurred in order to study at MIT, she earned her Doctor of Business Administration from Harvard Business School, where she began teaching in 1972. Notably, she went on to become the first woman to obtain tenure from or become a chaired professor at HBS. In addition to receiving many prestigious awards, Professor Herzlinger was the first faculty member to be selected by HBS students as their best instructor.

During her lengthy and influential career, Professor Herzlinger has worked extensively in consumer-driven healthcare, exploring how public policy innovation can allow for consumer choice that drives innovation. As a result, she has been nicknamed the "Godmother of consumer-driven health care." She has also been a medical technology entrepreneur, co-founding Belmont Medical Technologies and numerous other companies. She has been asked to serve on company boards—often as the first woman in that role. In addition, Professor Herzlinger served on the Scientific Advisory Group to the U.S. Secretary of the Air Force and has briefed the U.S. House of Representatives on health care economics and policy.

HERZLINGER: How nice to see you.

BUTTREY: You, too, professor.

HERZLINGER: It's nice to see there is a bioengineering specialization now. What is it part of? I didn't know MIT had anything special in bioengineering.

BUTTREY: It's a pretty new department. I think it started around or after 2000. [MIT faculty approved the biological engineering curriculum in 2005.] It's growing really fast and is especially popular now, given the pandemic. I really enjoy it.

HERZLINGER: That's great. As you know, my husband [George Herzlinger; MIT SB Physics 1965 and PhD Physics 1972; inventor and serial entrepreneur] has started a few bioengineering firms [including Belmont Medical Technologies], so we're very high on it. But we pretty much taught ourselves. It just wasn't a formal thing, or even close to it. When we were there [at MIT], they were just really starting the Biology Department.

BUTTREY: I would love to hear that story during this interview! But, just before we start, I want to thank you again for agreeing to do this interview for the AMITA Oral History Project. I know you've been interviewed a lot in the past, so I'm grateful that you've agreed to take the time to talk with me as well. I'm looking forward to getting at least a bit of your story into the MIT Archives.

If I'm not mistaken, after emigrating from Israel at the age of eight, you grew up in an Orthodox Jewish enclave in New York City, in the Crown Heights section of Brooklyn. Would you mind talking about what that was like?

HERZLINGER: I went to a Yeshiva for my primary and my high school, and it was orthodox Jewish Yeshiva. I went to school from 8:00 to 5:00. Half the day was spent in Hebrew studies, and they were conducted in Hebrew. Half the day was normal school.

Needless to say, I had an enormous workload. What it taught me—well, I was very ambitious: I wanted a career. I was always interested in things, so I took my work very seriously. Every day, I would write out a program of how I would get through my homework, which was copious. There were some excellent teachers who were moonlighting from [New York] public schools.

My school was a girls' school, and the girls all went to college. They were very intelligent. I think these moonlighting teachers just enjoyed this kind of non-raucous, obedient girls' environment.

The Hebrew classes were relatively easy for me because I spoke Hebrew so well, so I was skipped twice. The third time, I said to my father, "I'm going to be a social freak because by the time I graduate, I'll be 14, 15, and my classmates will be 17, 18." At my age, a two- or three-year difference is nothing. But in a teenager, it's a huge difference. So I stayed in the 8th grade for three years.

I had a teacher who would have us memorize chapters in the Bible in Hebrew. He would open up the class and he would say, "Well, Kira, tell me what the third sentence is, and Rina," my Hebrew name, "tell me what the 18th sentence is." And some of these chapters were a little less than fascinating. One was about how to slaughter a red ox. Now, that's good, how to do it humanely. But three times through slaughtering the red ox was two times too many!

Then, when I got to my high school, he was there again, with the same drill. What happened is my memory got very good just to get through all of this. Also, I learned work skills. I think if the load hadn't been so heavy, I would probably not worked so hard and not organized my time so carefully. I did want to leave it [the yeshiva]. I found the environment very sexist and misogynist.

BUTTREY: Even though it was an all-girls school?

HERZLINGER: Oh, and the religion itself. It's changed quite a bit. But at that time, the prayer for a man was, "Thank you God for having made me a man." For a woman, it was, "Thank you God for having made me as you wanted." So the idea for women was, yes, you were bright and you would learn many things, but that's it; you were going to be somebody's wife. I didn't have that idea at all. I wanted a career, so I found the environment stultifying. I did have one classmate who was my best friend. She wound up going to Cornell, but everybody else stayed in New York City. They went to Barnard or to Hunter or to Sterns, which was the women's branch of Yeshiva University.

There were some brilliant women [in our yeshiva]. New York State had Regent's Scholarships at the time—everybody in the state took the same exam, and this

schoolmate got the top grade in math or science. She was amazing. She had so many interests, a brilliant woman. But I ran into her a few years later, and she seemed unhappy. I thought perhaps it was just so hard at that time to couple the way the religion was then practiced with her inward intellect, and that it led to some unresolved of psychological problems. It's very different now. I went to a wedding, an Orthodox wedding, and there was a woman surgeon sitting next to me, and a woman who is an internationally known mediator in foreign affairs. So it's very different.

BUTTREY: What were your parents like, and what was your home life like? Did they hold different values than—

HERZLINGER: My parents were sole survivors of their families from Hitler. My father was a rabbi. He was a rabbi not because he was particularly religious, but where he grew up in Russia, being a Rabbi was the only education that Jews could get— They couldn't go to medical school, law school, whatever, so his whole family, the whole line, were rabbis. And these rabbis are very different from current rabbis. They were scholars. They studied the Bible, as did my father: he was a biblical scholar. He became a very successful businessman. It's interesting in the Biblical scholar tradition, the women supported their husbands, mostly by being retailers.

I think Estee Lauder and the great Jewish women who started cosmetics companies, they all came out of that lineage and that heritage. Anyway, he became a businessman—and he was a Zionist. He lived in the Jewish state and he bought property in what was then Palestine. That property enabled my mother, my father, and my uncle to go to Palestine. The rest of their family, for reasons I can't fathom, chose to stay in Germany. So he was, I would say, a scholar, a businessman. Very iconoclastic.

My mother was two peas in a pod. She was a very pretty woman and laughed a lot. And she was card shark. She was a professional gambler. She would gamble in Israel; she would spend every night gambling. People who didn't know her would sit down, play with her. They thought, "Oh, here's a nice, smiling woman!"

So my parents were a very iconoclastic. Both of them were very encouraging in my having a career. They thought I was very smart. They would play cards with me often,

and they let me win. And, of course, I thought I was so smart that I won. But in retrospect, it wasn't quite that way.

BUTTREY: Did they encourage you to apply to MIT? How did you end applying?

HERZLINGER: They'd never heard of MIT. This enclave [Crown Heights] was so sheltered that I really didn't know about Harvard, Yale—anything. I just knew about the New York City schools and Cornell. I was determined to leave this life, even though I knew nothing of what awaited me. MIT was celebrating its 100th anniversary when I applied; I read a story about it. And I loved science, obviously, and I really loved math. I thought, “Well, that's a nice school. And they said they'd admit women from early on.” Which to me, with this feeling of the misogyny and the lack of appreciation of what women could do intellectually or in a career in my community, that was fantastic.

So I applied. I had 99 [percentile] SATs and thought, “Thank God for standardized testing,” because I came out of school that nobody had ever heard of. There were maybe 10 Orthodox Jews throughout all of MIT at that time. So I got in. I had no idea what it was, but I thought, “Whatever I learn there, it's going to be very good. And it will enable me to have the career that I want.”

BUTTREY: What was your freshman year there like?

HERZLINGER: MIT, so you know, Kira-- Every institution has a checkered history. Sometimes it's great, and then it's not so great. General Electric, for example, for years, was lauded since its founding by Thomas Edison as fantastic. And in the past decade, not so fantastic. IBM, fantastic, fantastic—and then not so fantastic.

Some of them recover. I was on the board of John Deere, another iconic company that was fantastic, fantastic, and then near bankruptcy, and then it recovered. When I came to MIT, I think it was in a low point as an academic institution. In the '50s, the U.S. was feeling very dubious about its prowess as a scientific community, because the Russians had beat the U.S. in the space wars. As a result, there was a great emphasis on science and not so much on technology.

MIT is an institute of technology, of using science to make things happen, but many of the courses were incredibly theoretical. I'm remember taking a physics course with some guy who then turned out to be my husband's thesis advisor and a good

friend, but I thought his stuff was irrelevant. He was talking about how fast feathers fall in an elevator, and I thought, “No, no interest.” In other words, I had a very practical mind. And virtually everything, especially the math, was taught in a very theoretical way.

BUTTREY: Is that what drove you to studying economics?

HERZLINGER: Yes. Economics at MIT at that time was mathematics applied to practical problems, and it was wonderful. Once I got past Samuelson [Paul Samuelson, MIT Professor of Economics 1940-1985; awarded the Nobel Memorial Prize in Economic Sciences in 1970], whose theory of the world-- I didn't agree with then and I don't agree with now. But once I got past that, we turned to practical economics courses, I took a course in industrial economics, which was competitive strategy. And it was fantastic, just incredible. Then there was a course in macroeconomics with a group of very distinguished faculty debating--

BUTTREY: Do you remember names of any of the other faculty?

HERZLINGER: Oh, there was a man named E. Cary Brown [MIT professor of economics 1947-1986; expert in fiscal policy]. They weren't Nobel laureates, but boy they were smart. The industrial economics was Richard S. Eckaus [Ford Foundation Professor of International Economics Emeritus; headed MIT's Economics Department from 1986-1990]. They were just excellent. They weren't motivated so much by theory. They were motivated by the problems, the practical economics problems of how do you compete. How does one firm compete effectively against another? And, on a macroeconomic level, how do we structure the economy so it's both productive and fair?

At that time, in a Democratic regime, Kennedy was just elected as U.S. President, and this group was debating cutting taxes. Taxes were too high. And they [the Economics faculty] were very influential, very correct. Taxes were cut and the economy boomed. It was really thrilling to be with them. One of them was on the Council of Economic Advisors, a man named Paul MacAvoy [MIT Professor of Economics 1963-1964; Professor, MIT School of Management 1966-1975; Co-chair of the Ford Administration's Council of Economic Advisors].

BUTTREY: That sounds like an extraordinary group of professors to study under.

HERZLINGER: It was, and they were very inclusive. I'm this 19-year-old woman, and they were not. Their knowledge of business in the world vastly exceeded mine. Very inclusive. It was lovely.

BUTTREY: That's great to hear. Do you remember how many women were in your class?

HERZLINGER: We started with about 20 women. And they weren't called women, they were called coeds—the “women” went to Wellesley. MIT women were coeds—a sort of third sex.

This was before coeducational housing. And the women were limited to a home with 20 slots, so they met higher admissions standards, likely, than the average man. But although they were smart, they likely found the misogynist attitude of the school oppressive. I was often told that I came to MIT only to earn “my Mrs.”!

When I took exams, I would never use my first name, Regina, but only my initial R so the grader wouldn't know my gender.

BUTTREY: What a crazy story.

HERZLINGER: Well, I'm sure that happened everywhere. That was the era of women breaking through. If you talked with women at Caltech or other schools that were very rigorous and where there were relatively few women, you'd hear the same kind of thing.

BUTTREY: Do you think that, in part, drove the women students to drop out?

HERZLINGER: Oh, for sure. Because like almost everybody at MIT, these were people who used to being regarded as very competent students. It wasn't just the misogyny in the school, but anybody with any brains (which excludes me) would think, “Oh, in this environment I am not unique. If it's so tough in an academic environment, what is it going to be like in trying to pursue a career?” And I think they just thought, “You know what? I couldn't do it.”

BUTTREY: Did you have the same thoughts? “If I have to—”

HERZLINGER: Not at all, no. Fools rush in where angels fear to tread—that's me. I get an idea, and mostly, I just go ahead with it.

I think, in part, it is because I survived not only the Holocaust, but I was in the War of Independence in Israel. I was nearly killed by bullets. I saw bombs dropping in front of me. So as a child, I had a very dangerous existence. I think it made me stupidly carefree—I survived all that, I can survive anything.

BUTTREY: That's just astounding. I can understand how being in that environment would make even the sexism of MIT seem so small.

HERZLINGER: Well, MIT had, and sadly still has, a high suicide rate. Just as another example of fools rush in: I had a very dear friend, a woman who was a year behind me, who was just lovely and so bright. She fell in love with some man who, for some reason, didn't care for her. At that time, there was a book, I guess it is still there, with pictures of everybody. She was so beautiful. People would line up just to see her. And I found her—we lived at McCormick—out on a ledge one night, and I talked her off that ledge. And now, in retrospect, I think, “Wow. Oh my God. You could have caused her suicide.” I didn't know what the heck I was doing. But I do think my early childhood made me dare to do things that people who are more cautious would never.

BUTTREY: I would love to talk more about your MIT experience, but I do want to get to some of your later life and career as well. So if it's OK with you, maybe we could move on to talking about your experience at Harvard.

HERZLINGER: I borrowed my way through MIT—they deemed few women as worthy of scholarships. I incurred heavy debt, and I went to work in a consulting firm. I did very well. I had a staff of 40, and I was 25.

But I married an MIT classmate, my wonderful husband, George, and wanted to have children. And I was constantly on a plane. In fact, I lost my period. Planes weren't pressurized at that time, and they weren't designed for frequent women travelers. And so I thought, “I just can't keep up with this. They're very welcoming, but I can't keep on with this.”

What I liked about my job was research, dealing with real problems. And I'd read a book, a casebook from the Harvard Business School, which again, I'd never much thought of, even though when I graduated from MIT, I did go there [Harvard Business School] to see if they would be interested in me. As it was, I tested well. They said, “Oh, great.” And I said, “Well, how long have you been admitting women?” Because by now, even though I'm grateful [for my undergraduate years at

MIT], I understood that knowing the answer would help. And they said, "One year." I thought, "No, thank you."

But four years later, after reading this great case book, I applied to Harvard Business School to become a faculty member who could continue to do the kind of research I really enjoyed doing. There were no women faculty [at HBS] at that time, but, of course, with me, that just flew right by my head—and, after I graduated with a doctorate, I was offered a job.

But the condition was that I couldn't teach. And the reason was that Harvard Business School is a teaching school. Teaching, it's tremendously important. Skills in teaching, skills in working with students, not that it's not important at MIT, but it's really key at the Harvard Business School. But my appointment specified that I couldn't teach. The reason was they had a woman teacher. She was really great, but she was South American and she was an international economist so she had an accent and she was very theoretical. She was not that acceptable to a student body that, like me, was tremendously practical. So, ergo, women couldn't teach.

I said to the Dean, "I'll fulfill my obligations, but I've no future here." I didn't threaten. I just thought, that's the way it is. I left to work for the then-governor of Massachusetts. After about a year, the Dean came by and he said, "Well, we changed our mind. You can teach. We will allow you."

So I taught. I was pregnant. My very first class, my entire department came to the class. They thought a riot would break out. They meant well; they were there to rescue me. But the school has ratings of its teachers, which are published, and I [ended up topping] the whole department. The reason was that I understood what the students didn't understand, because I remembered that I didn't understand it either, and what it took for me to get there. I think it's good to have teachers who are not that bright, because they have to learn things. And they understand what their students don't understand.

Anyway, to my surprise, I loved teaching. But I did do practical research. I did my doctoral thesis at the Mass General Hospital, where I put in a system to measure the productivity of the physicians. I wrote the program, looking at whether the feedback of that information of how productive they were relative to themselves, their peer groups, for different kinds of patient visits--

BUTTREY: How did you decide on that topic?

HERZLINGER: I went there [HBS] in finance, but I ended up being in a field called Control, which is a euphemism for accounting.

This was after the Vietnam War. Robert McNamara, who had been head of the Defense Department, and who, poor man, suffered greatly because of the mistakes of the war, he taught accounting at the Harvard Business School.

There were a bunch of “whiz kids” who were recruited to help fight the war, and he was among them. They came out of that department. Among them was my mentor, who became Assistant Secretary of Defense—Comptroller [at the Pentagon].

BUTTREY: Who was that?

HERZLINGER: His name is Bob Anthony [HBS faculty 1940-1982; served under Robert McNamara in the Defense Department and is accredited with aligning the five military services’ accounting]. At the time, you couldn’t compare the different branches of the services. So, if the Navy bought a plane and the Air Force bought a plane, there was no way of comparing those planes—whether they were better value of money, better planes. No. Because the accounting systems were all different.

McNamara, who taught with my mentor as part of this “whiz kid” program, recruited Bob to put in this accounting system, which he did. And Bob [Anthony] was very politically naive, like me, so when he put in this system he didn’t realize the enmity he would engender by making all of this so transparent. The Navy didn’t really want to be compared to the Air Force. McNamara wound up letting him go.

But I thought he was terrific. I thought he was so principled in doing this. And I kind of admired how dumb he was politically. He and many of the men who were involved with Vietnam went on to do NGO [non-governmental organization] kinds of things, I think, to expiate for what they had done [vis-à-vis the war].

McNamara became the head of a new organization, the World Bank. A man named [Alain] Enthoven [MIT Economics PhD 1956; studied national health expenditures and health insurance] did a lot of work in healthcare, and my guy, Bob Anthony, started a course on measuring performance in nonmarket organizations. I thought that was cool. It’s was really interesting. I admired him.

And so he thought this would be an interesting thesis. ["Control of not-for-profit organizations: an experiment. The implementation and evaluation of a management control system in the Bunker Hill Health Center," 1971.] I did as well. Of course, when I came to see the doctors with my printouts, they thought I was an idiot. If the printouts showed things they didn't like, like they were very high cost, or their productivity had slipped, or something else they didn't like, the numbers were wrong—which was hilarious, because these doctors, smart as they were, had no idea where these numbers came from.

But I thought my problem, in addition to being young and a woman, was I didn't know much about medicine. And did I learn a lot of medicine to be credible in giving this feedback.

Meanwhile, my husband had been teaching physics at MIT. Richard Nixon—crazy Richard Nixon—genius, madman, and, of course, very self-destructive. He thought, Kira, that the time had come for artificial organs. This was in the early '70s. That we had enough science so we could build artificial hearts, artificial pancreas, artificial kidneys, livers-- As you know, the shortage of organs for transplant, it's a major healthcare problem all over the world.

There was a group of astrophysicists who got a contract—for reasons unknown to me—to build an artificial heart. My husband, George, was recruited to that group, which was staffed mainly by physicians. You know the heart is an electromechanical instrument. They didn't know any physics. And he serendipitously, like me, got very interested in medicine—

Was it serendipitous, or was that a lot of government money was flowing toward advancing the technological basis of medicine? Probably the latter, and he got swept up in the tide.

There is a device called the intra-aortic balloon pump, which is a bridge to transplant. It's a balloon that's inserted in the aorta. It's pumped synchronously with the heart. It helps hearts that are so weak that the people need transplant. George was very instrumental in developing that. My husband, unlike me, was a straight 5.0. I don't what the grading scale is now. He was a straight A student. A very brilliant man, a very nice man, but really an entrepreneur. I just didn't see his working well in a big

company. He had things that interested him. That's what he would do. And so that's how we started our companies. We started them because I thought he would be very happy as an entrepreneur and not so happy in a big firm where political skills are very important.

So the two of us [became medical device entrepreneurs], just by sheer chance, or maybe not, as I said, maybe he was in the environment at the time that medicine was pretty primitive and needed better management, better science, better technology. So we got into that.

BUTTREY: What companies did you start together?

HERZLINGER: We started two.

We started one that made the smallest intra-aortic balloon pump which we invented [Belmont Instruments]. And we OEMed it [original equipment manufacturer; making products that are sold by another company]. We had no sales force and it was a very technical sale. We had a large company, on whose board I was, that sold catheters selling this intra-aortic balloon pump. And with time, I thought, "That's a real mistake." The salesforce sells catheters, which takes a lot of skill, but a catheter, which is a tube, and an intra-aortic balloon pump are miles away in complexity from each other. And the buyer [for the pump] is very different. The catheter buyer is probably a finance person. The intra-aortic balloon pump procedure has to be done by a transplant surgeon or somebody who is clinically very advanced. You need different kinds of salespeople to sell to these two different customers. So we sold that company.

We started another company [Belmont Medical Technologies] to make rapid infusers that infuse blood in people who are going to die because they're bleeding to death. The body has five liters of blood, most bodies. And our rapid infuser can infuse blood, five liters, in less than five minutes. Now, when you open a faucet and water drips out, there are bubbles in the water. So one of the great dangers of infusion, especially rapid infusion is, in theory, are the air bubbles in the blood. They can cross the blood brain barrier and cause strokes. So we vented the air, we heated the blood. We had many improvements in rapid infusion, which one at a time, sound

kind of trivial until you try to do them. They actually require great engineering skills and manufacturing skills. And that pump became standard of care.

We never took outside money for our companies we owned. It slowed our growth, but we could do things we wanted to do. We started these companies so that we would have a good life. Turned out, they were lucrative, but that wasn't our premise.

One of the things we did is to develop a pump for children who needed rapid infusion. That's a real engineering challenge, to rapidly infuse that fragile, small circulatory system. And as a business proposition, it's a joke, because the time required to build a device is enormous, and the market is very small. I don't mean that as a pun, but the market for adults versus the market for children, it's just day and night.

But we did it. We built a smaller version of the rapid infuser, because we own the company. And George, he was really fascinated by building this pump for children. And, as it turned out, it was very useful for militaries. The big pump was about 36 pounds, and the little one weighs 1.6 pounds. Of course, it doesn't have the power [but] it'll keep people alive out as medics carry it out on the field. We sell them to any military that wants them.

One thing that might come out of this is a lesson for people who are always thinking: venture capital. It is something so sexy—venture capital. They do wonderful things. But actually, you pay a price for that outside money. One price you pay is whatever it is that you innovated, that you started your firm or your idea for, it's going to get compromised with venture capitalists who have to exit—that's their business model—in four to six years. They're not going to sit around and wait for you to build the pump for children.

BUTTREY: That's extremely interesting, and such an achievement.

HERZLINGER: I thought so. I was very happy with it. People were saying, "You're growing so slowly. You'd grow so much faster [with venture capital]." We did hire our own salespeople second time around.

My husband got sick, unfortunately. I took over the company. I certainly didn't invent any new products.

BUTTREY: Were you more on the business side? What was your role?

HERZLINGER: I was on the board. I'd been on the boards of 10 public firms and lots of small ones. I teach a course on how to innovate healthcare—not you should, you could, you would, but how do you actually build the business [Harvard Business School: Innovating in Health Care (IHC)].

So I was on the board of our firm, with some people we recruited.

Even though it was a private company, we wanted to pick their brains. It was him and me, and we needed other points of view. Anyway, I took over the firm. I doubled the profits every year, two years.

I put the firm up for sale. We had eight bidders, and I sold the firm.

I hope to have a patent for something new for COVID. We'll see.

BUTTREY: I'd really like to get back to COVID, but: In addition to being a professor and being on all these boards, you've also written multiple influential and best-selling books. You regularly contribute to the *Wall Street Journal*. You get quoted in the *New York Times*. I've seen many videos online of you giving speeches to prestigious groups. What motivates you to communicate your work more broadly?

HERZLINGER: Well, what's the point? If you do your work and nothing happens, what's the point? So: trying to influence public policy. Healthcare is very, very, very complicated. And these poor people in the Congress [who also have to consider] healthcare in China, and the Defense Department, and satellites, there's no way they can know all that stuff.

So I thought, "I have a point of view, and I'd like to communicate it." I think the healthcare system, while it has so many brilliant people, amazing people, it's a mess. It's vastly inefficient. Good technology doesn't get properly commercialized. Mediocre technology costs way too much. Customers are demeaned. They're called patients. You'll be patient, my time is very valuable. They're called illiterate. It's just a system that could use a lot of managerial help, which is what I think I understand. I use whatever tools I have at my disposal to try to share my point of view.

BUTTREY: Looking back, how and to what extent do you think your time at MIT shaped your life and career?

HERZLINGER: Well, I think the economics I learned completely shaped my point of view about how firms work and how they do good— Well, not so much do good, that wasn't a big emphasis, but how they do well, and how they can succeed without being an oligopolist or without violating tenets of honest competition. And I learned a lot of macroeconomics, how the economy should behave. So it was tremendously influential.

And those who said you came here for your “Mrs.” [degree], well, it turned out to be true. I did meet my wonderful husband there.

When we were at MIT [in the 1960s], Kendall Square was full of machine shops. And I am so proud of the institution [now].

I started this [interview] by saying institutions go up and down. I think it [MIT] was not a high point when I was there, academically. But it's so great. Kendall Square, not just the square, but the hundreds of thousands, millions of lives that have been saved because of great biotechnology, medical technology innovations carried out in Kendall Square. It's really wonderful.

My husband and I would like to start a foundation of some sort in bioengineering at MIT. We think it's a great institution, not only academically, but in bringing these great ideas into fruition. If you have any ideas, let us know!

BUTTREY: It's exciting to hear about your enthusiasm for biotech. It's also exciting for me to be a student in the biotech world, in Kendall Square.

HERZLINGER: Absolutely, absolutely.

BUTTREY: Would you mind speaking to how the current COVID-19 pandemic has affected the healthcare field, or what you're doing now in regard to the crisis we've been facing?

HERZLINGER: There's a silver lining to it. Clearly, COVID created technology. I wrote my first case about mRNA 25 years ago. It just wasn't getting anywhere. So COVID has spurred amazing technology. It takes a pandemic to get these things done.

COVID also influenced the healthcare system. Telemedicine has been around for 25 years. I think telemedicine is wonderful for people in rural areas, busy people, people who can't get around. It was just handcuffed by stupid regulations and by poor payment and all of that.

But I think with COVID, a lot of medical services that were delivered only in hospitals came out of the hospitals, because we have 2.8 beds per 1,000, hospital beds per 1,000.

And Germany, which spends much less than we do, has 8 beds per 1,000. So when COVID hit, we didn't have hospital beds. People were thrown out. And ambulatory surgical centers, urgent care centers, retail medical centers all sprang up to fill that void. I consider it very helpful to get that care out of a hospital.

For example, this will sound ridiculous, but CVS—not necessarily CVS, something like it, a ubiquitous community presence like CVS—has 10,000 stores. They're starting to help us to coordinate the care of people with chronic diseases. And people who have these diseases don't have “a” disease; they have lots of diseases, and their management is very rarely coordinated. The lack of coordination diminishes the quality of care and increases its cost.

With CVS, it's down on the corner, two blocks away. You can go and have all of that stuff monitored. They're not doing brain surgery in CVS, but so many things that are so important to coordinating the care of people, they can do that. And because all of these people get kicked out of the hospitals and needed to find other sites of care, the “alternate site industry,” it's called, spun up. So COVID, ironically, has been a sort of blessing.

BUTTREY: That's really interesting. Thank you for sharing that perspective on what has been happening, especially given the decades of study and teaching you've done in regard to healthcare management, and your promotion of a more consumer-driven system.

HERZLINGER: It's been great to talk to you. Thank you so much.

BUTTREY: Thank you. I appreciate your taking the time for this.