

**Houston Asian American Archive**  
**Chao Center for Asian Studies, Rice University**

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Interviewee: David Fish  
Interviewers: Anh Thu Dang, Tiffany Sloan  
Date of Interview: July 22, 2019  
Transcribed by: Anh Thu Dang, Tiffany Sloan  
Edited by: Priscilla Li  
Audio Track Time: 1:36:06

Background: Dr. David Fish was born in Busan, South Korea in the middle of the Korean War in 1950. His mother, originally from Seoul, was separated from his father around the time of his birth, but the family was later reunited at the war's end. Fish's family moved to Japan following the Korean War and lived in US military housing as his father was an employment of the US government. Fish stayed in Japan until the age of 12 when his father's passing prompted the family to move to the United States. In the U.S., Fish went on to attend the Massachusetts Institute of Technology (MIT) where he pursued electrical engineering for computer science and graduated in 1972.

Following his time at MIT, Fish worked at a software company for several years before returning to MIT to study electrical engineering in graduate school. However, Fish decided to leave the program a few years later, and at the age of 28, enrolled in medical school at the University of Texas Southwestern in Dallas. Fish graduated and began his residency at the Massachusetts General Hospital at the age of 31. Later on, Fish became academic staff at Birmingham Women's Hospital before moving on to independently practice cardiology at the St. Luke's Hospital in Houston. Following these accomplishments, Fish became the program director for teaching interventional cardiology at the Baylor College of Medicine program at the Texas Heart Institute where he has made instrumental contributions to numerous medical technology devices.

Setting: This interview was conducted in the Digital Media Commons located in the basement of Fondren Library on Rice University's campus.

Key:

DF: David Fish  
AD: Anh Thu Dang  
TS: Tiffany Sloan  
—: speech cuts off; abrupt stop  
...: speech trails off; pause  
Italics: emphasis  
(?): preceding word may not be accurate  
[Brackets]: actions (laughs, sighs, etc.)

Interview transcript:

**AD:** Hello. Today is July 22nd, 2019 and we're in Fondren Library's basement, the Digital Media Commons to interview Dr. David Fish. Um, my name is AnhThu Dang [**TS:** I'm Tiffany Sloan] and so we will start the interview with the very first question. So can you tell me what is your ethnicity?

**DF:** Um, my mother was Korean, and my father was American from Ohio. He was the first born in the US. His family, they had come from the— what is now the Ukrainian area of Russia— an area. Um in 1905, because they were escaping the Pogroms where there was persecution and murder of a lot of the Jews in the area. So, they had left with so many others and eventually made their way to Ohio.

**AD:** Um, and so, where and when were you born?

**DF:** I was born in 1950, December 29th in the middle of the Korean War. My mother was from Seoul and her family was in Seoul. And, at the time, in June, I think it was June 25th, when the war broke out, she and my father were living in their house in Seoul, and they—they were forcibly separated by the military police. Um, so it's a long story but my mother eventually made it, and escaped south to Busan, which was the last perimeter that was not overrun by the, the war. And I was born there in a farm hut— in a mud hut on the outskirts of Busan.

**AD:** Um so how would you describe the household you grew up in?

**DF:** [laughs] Well, ...a lot of our sort of psyche of the family was informed by the war and escaped from there. My mother, my father were reunited after the war; they were separated for a long time. And my father came to get us and we were in Korea and we moved to Japan where my father worked for the US government. We lived a fairly privileged existence in a military housing and I went to school in— US school and we had sort of— we lived in the housing area for US personnel which was kind of a sequestered area. So, we had all the reasonably typical kinds of things for American people you know schools, stores, what not. And- so there were just myself, my father, my mother. And later on I had a younger sister born. There were fairly typical things: went to school, school kid things, played baseball, so— it's reasonably normal if you want to call it that.

**AD:** So you mentioned that your family moved to Japan after the Korean War ended. So was your schooling typically based in Japan, before college I mean?

**DF:** Um, well I went to primary school in US military-sponsored school and that was probably fairly typical of US schools at the time. Uh, when I was in 7th grade, my father died and we left that area and went to live in Los Angeles.

**AD:** And so what was your childhood dream? What did you imagine you would be in the future when you were younger?

**DF:** When I was—I was pretty young when we lived there and I had usual varied ideas of yourself, you know. When we came to the US though, it was very different. We lived in— we didn't have much money and we lived in the back of our distant relative's house for a while. And I went to the same public schools with everyone else in my area. And it was a little rough, something I wasn't used to since I was fairly sheltered as a child. Um, and you know you had to get a long, kind of rub elbows with all the other kids. I think at that time I kind of fancied myself as something like a scientist? Later on in high school, I focused on math and science. And I spent my summers doing additional programs in math and science.

**AD:** And so now we will move on to your later education. Um so can you tell what college did you go to and what were you majors? And how come did you choose to major in that said major?

**DF:** Yeah. Well, I went to MIT, Massachusetts Institute of Technology. And that kind of has an interesting story. In Korea, and large— a large part of Asia, MIT has a huge reputation. They very much respect math and science and technology. And my father had gone to a technical institution; he went to what was then the Case Institute of Technology, and that later merged with Case West—Western Reserve and became Case Western. Um, but he was a chemical engineer and I had sort of always imagined myself being some sort of engineer when I was growing up. But when I was born in Korea in the midst of nothing, and later on, when my- my mother tells the story that when I was born, she said to herself that I was going to go to MIT, her son was going to MIT. So that's the kind of almost mythical stature that institution has in- and psyche of modern Korea. And later when she told my father, he was kind of

frightened by the idea because it was such an intimidating idea, you know, nobody else goes to MIT, and he imagined how much it would cost. My father had a very rough young life growing up in the Depression. He had to work one year before he could go to college and the next year he took a year off to work again and he did that for seven years. Um, he put his younger brother through school who started after he did and finished before he did because my father had the ability to work. So it was all a pretty intimidating idea, matters of such privilege, and potential expense. So, ultimately in high school, there was almost no question wherever else I went, I would probably want to go— I'd probably end up going MIT. And that's what happened. So, when I came home one day, my mother was looking out the window for me. She saw me turn the block and walk down our street, so she ran out into the street waving that acceptance letter. That's the kind of a meaning it had for her. Uh so I went off to MIT thinking I would do physics or some form of engineering. And in the first semester I was there, I took a survey course in electrical engineering and computer science. And got the notion I would do that.

**AD:** And so, you, you were both majoring in electrical engineering and computer science?

**DF:** It's a single— kind of like a sub—major they had. It's, it's not a random sort of doing multiple things; it's actually a program they substitute certain things like program of linguistics for other courses that you would normally have in electrical engineering like statistical thermodynamics, for example. So there's— within electrical engineering, electrical engineering for computer science has somewhat different course of events.

**AD:** Okay. So when did you realize you wanted to go to medical school?

**DF:** Um, it's also a long story. I graduated in electrical engineering in '72 and I took a job immediately, worked nearby MIT actually, in a kind of square area in a technology company. I did both hardware, software and worked at that for several years— At the time was also in a band, and took a year— after couple years took time off to try to make success out of music. Failed miserably. Then went back to graduate school at MIT in electrical engineering. And in my thesis project, well I should say my thesis advisor was sort of an ideal for me. He was an MD, PhD and was a cardiologist and did a lot of science relating to cardiology. So, I was fascinated by that. And so I started reading physiology and some history of medicine, and then altered my course schedule so I could learn more about those sorts of things. And ultimately, became convinced that I wanted to be a physician so—after three or four years of working on my PhD, I decided to— 'cause I was getting old—pretty old compared to most medical students— decided to abandon, and go to medical school instead.

**AD:** Um so what medical school did you go to?

**DF:** I went to the University of Texas, Southwestern in Dallas.

**AD:** So, you mentioned that you were at that time in MIT, so what made you go all the way to a medical school in Texas instead of some other ones in the same state?

**DF:** Well, I had little or no awareness of what was between the coasts. Grew up as a adolescent in Los Angeles and went off to college in Northeast so I didn't have much experience with anything in between. Um as it turns out, my girlfriend at that time, later my wife, was from Texas. And so, when I was planning for medical school, she said "Well, have you thought about applying to the University of Texas?" and I thought, I said "Well, do they have medical schools there?" "[laughs] So I looked it up in the book and I remember in the book, I was kind of surprised that for the same \$25 application fee, they would enter your application into all 4 Texas schools. And that was a bargain so I applied. And ultimately I was admitted in and there's more machinations going on there. I decided at the time I was working at the University of Pennsylvania doing research in physiology. And I decided that I would stay at the

University of Pennsylvania. I really liked the people, I liked the program. And so, I applied and was admitted to the University of Pennsylvania. And then the plan was for my fiancé to move down and we would start our lives there in Philadelphia. I made a lot of friends and I liked the place. But there was a really large jump in the tuition and I was at that time, you, you guys probably have no notions of this but at that time, the interest for loans of houses and student loans were about 14% range. Yeah pretty scary even then.

And so— you know I had spent money for undergraduate school, and then for graduate school, and then the time of medical school is going to be more time borrowing money. And we had no money so— I went to the Dean at the University—University of Pennsylvania, I asked him if he could help me in some way. He was very nice and we talked about various things. And he asked me where else I applied and I happened to mention I applied to University of Texas in Southwestern. And he kind of leaned back in his chair and said, “Well there they have the better medicine department than we do”. And I went home and thought about it, and I decided I would kind of make a compromise going to University of Texas if they would have me so— They were nice enough to admit me again and that’s where I went. Um it was a great move, got a great education, and when I went to work at really good post graduate institution, so it worked out well.

**AD:** So did you ever encounter any challenges during your medical education that made you reconsider your decision of becoming a medical student?

**DF:** No. I mean medical school was kind of— It’s got of big reputation of “Oh my goodness! No you can’t get into a medical school” and even among my professors and advisors and student— fellow students in MIT, the idea of medical school was still, you know, very intimidating. So I was appropriately intimidated. Turns out medical school was nothing compared to you know, studying science in MIT. Um there— It was just that the volume of information was large. I knew that no one there was much smarter than me, and they’re all pretty smart, so medical school was actually easy for me [**AD:** Mhm]. All you have to is good work habits, and you’re gonna learn what you need to learn for the most part.

**AD:** So when you first start your internship and your residency, was the real world application of the knowledge you got from medical school any different or like a shocking experience to you compared to what you learnt in school?

**DF:** Well you know, when people ask about the things I do, and what I tell them is that you know, they put the mantle of responsibility on you one thread at the time. So eventually you get to where you’re going, you’re really prepared and I went to— I did my residency at Massachusetts General Hospital and it had a very kind of sounds intimidating, but it really relied on the general competence and responsibility of a residence. They had a system, which they called the “team system”, which was stratified in a different way from most institutions. And that is that the intern or resident was on call by himself. And every member of that team would take call every day in rotation. But, well, sounds intimidating ‘cause you’re by yourself from the very first day. So, that did sound kind of tough— It took a lot of work and there was someone to call if you needed help, but most of us really didn’t need help that much. And in that system you got confidence very quickly. Um, the nice part of it was that you were the only one who had to deal with the patient; you didn’t have to wait for a junior resident to do his work or the attending to do his work before you could get to the patient, which was what I was used to as a clerk at—in medical school, which had the traditional teams, other team systems where everyone worked together, and then you’d have to— on other days you’d have to cover— on the day you’re on with the team you’d have to cover patients that you don’t know anything about from other teams whereas in the Massachusetts General system, all you had to cover were your own patients. So that worked out really well. So no I was, I was lucky I went to an institution at University of Texas that was very strong; we did our work clerk clerkship work at some fairly high volume and difficult places that—Parkland Hospital which is a county hospital

and a VA Hospital so it was– I got used to that sort of stuff.

**AD:** So what would you say is the highlight of your overall experience of medical school, academic training and residency included?

**DF:** Um I–I really liked my residency at Mass General. For me that was the highlight of my training [**AD:** Mhm] and has contributed to my confidence for the rest of my life. We worked super hard. You don't– They don't do that these days. In those days, you know, we would be up 40 hours at a time, and we do for example, when I had a service, when I was a junior resident I had a service of 50 patients, that we had to take care of and we took 15, maybe, 12 to 15 admissions every day, and– So the work was hard, but we were, we were up very late, and but it sort of fostered a lot of comradery and kinda mutual help. And the sheer density of experience just leads you to learn a lot. And you learn how to prioritize, you learn how to– what's really important and what you cannot slide and um– So there's really nothing like that. And for me that was, that's still today the highlight of my work experience in medicine.

**AD:** Okay. Do you have any questions?

**TS:** Yeah. Um, so what were some of the reactions you got when you said you were going to change careers?

**DF:** Well people keep asking me about that but I- I usually say “If you follow your nose and your heart you end up in the right place, usually.” When you– when you're making choices, career choices you're a child, like what you're gonna do and college and– You don't know anything. And so your choices are not really well informed. They kind of take account of certain biases, but you kinda have to be open minded when, when you so young. It's not as if any education you get is wasted; you're learning things no matter what field it's in. But you have to listen to yourself, and if you're going to make a change, go ahead and make it early. You know. Don't belabor, don't belabor a choice that isn't for you for a long time. That would be my advice. Um, you know, I like engineering, I still like engineering. And it's allowed me to do a lot of things, includes– including start some technology companies. But the– when I was doing engineering, I sat in the room with my terminal computer. Everyday. All day. Day after day. And I did have people to talk to, relating to your job and during the job and stuff, but pretty much the work was solitary. Just me and the universe- universe of programming. And it gets a little lonely. So you can go socialize and stuff like that but it's not the same thing. And I kind of felt I was more interested in dealing with people. And you know you really can't be certain of those things when you're so young but after a while with a little experience, you get this– these notions. And for me it was a good choice; it took *a lot of* investment in making a change. So, you have to be certain in your heart if that's where you wanna go because it's a big investment of time. I didn't start my first real job until I was 40. So [laughs] And you know, it's not for everyone. But I just counsel young people to be sensitive to what they're feeling. Be sensitive to, you know, their ideas, or their ambitions, fond hopes. And you want to be able to get to a place where you get up every morning and be glad to go to work. And to be caught up in what you're doing so that the time doesn't drag. And that's the kind of life you want.

**AD:** Any more questions?

**TS:** And do you think there was a mindset that you kind of developed in MIT that helped you progress throughout the medical field?

**DF:** Oh sure. You know you– you learn all the paradigms of thinking. You learn all the sys– very– all these different systems of knowledge. Um, math, physics, what not that show you and educates you how the basics evolved into higher order concepts and principles that have enabled absolutely miraculous developments. To see the progression of all of this system of thoughts, and you also require real capacity

for using these tools: the tools of math and science to do things and— In medicine those things are really helpful. I chose cardiology ultimately for complex reasons but one of the things that I liked about it was that all the principles of physics and science and fluid mechanics and things like that are very close to the surface of what you're doing, you know. It's a systems-oriented kind of specialty. And so that was super helpful, going to medicine. I remember in medical school, my second year, we were doing a pedigree analysis, you know what that is? [AD & TS: No [laughs]] Well when you look at the inheritance of traits. Um, if one, if one parent is carrying the trait and the other parent is not, then chances of passing those traits to your children are probabilistically about half. But those traits can either be dominant or recessive, in other words. It's called classic Mendelian inheritance. The— If you get one copy of the gene and it's dominant then you're going to have the trait. Whereas in a recessive condition, you have to have two copies of the gene in order to express that trait. So there's conventions for calculating the risk of bad traits, lethal traits or disease-associated traits to your children. So in pedigree analysis, they're concerned in the practical genetics of counseling parents who have an inherited disease condition, what the odds are of passing it on to your children and so forth, right?

If you have a condition like Huntington's disease which is lethal by the 5th decade of life, you would rather not pass that on, for example. So you would have to understand if you're going to have children, what the odds are. So, these multiple levels of information you know if you know information about your grandparents and then then parents and children, you can understand what the mathematics are of the— any party descendant of, of a union— what the likelihood is of those offspring having these traits. So we have this simple pedigree analyses is being done and they would do the calculations, which are just simple math, it's actually simple probability theory. And— So the professor assigned this problem to us, set of problems, and we solved the problems. And there was one that was kind of difficult, and several of my classmates asked me “Gee, what did you get for that? How did you do that problem?” I said “Oh it's really simple. You just do it this way” “Oh yeah we get it” So they all answered that same thing. We all got it wrong. [laughs] And I couldn't understand that. And so, I went to the professor and I said “Can you explain why the answer is this and not that?” And he explained it. And the way— his method of doing it was very wrong. He, he violated fundamental laws of probability in order to derive his answer. And I said “You can't do that. You're violating, you know, the independence of events when you say that” And he didn't understand. Because he never had— he didn't get a technical education. He did biology, which is fine, I'm not saying it's a problem.

Um I explained to him all the events and what the sequence of independent events would be and what the of probability would have to be. And I said— And I said “There is a system of probability math called Bayesian probability in which you take account of what you know to compute what the result of the things of what you don't know” and I explained all that to him and he was shocked. And he said, “Well the whole field is doing this wrong.” So, there had been some propagated misinformation in the field. And he wanted to write a paper. I said “Well you're basically writing a paper that says two plus two is four and not five” He said, “Yes but the field has to know about this” So we published the paper. And essentially it explained the basics of Bayesian probability, and in that sense was saying two plus two is four and not five. And those kinds of— that's the kind of thing that trained and real command of mathematics and quantitative issues and how to navigate you know the world of numbers and problems and how that— to this day in my life is an advantage. So, with— with an associate of mine, I've actually started a couple of medical device companies in which this kind of application of scientific principles of math has been very helpful.

**AD:** That's a very interesting story actually. [TS laughs] Okay so now we move to your later life in the US. Um so I learned that the first city you came to America was Los Angeles and so how was the first experience like? How did it compare to what you imagined before you arrived in the US?

**DF:** Yeah. Well, you know, in Japan we lived in these enclaves, which were protected areas US personnel, housing for the US personnel. And we went to American schools in which they had American teachers and learned in English and it's pretty [inaudible]. But you know I had this, I had harbored this really kind of fond idea about America. I wanted to go live where my father had lived, you know. My father's an American. I wanted to be an American. Um and that really was informed partly by the fact that I didn't see my father until I was almost 4. I was born in the middle of the war, and he came back for us later after the war. Um, and I— we moved away from Korea, went to live in this [inaudible] American community. And so, as a child I almost repudiated being Korean in order to— because I couldn't even speak English to my father which is— my mother tells was hugely frustrating and I think from the age of 4 to about 5, she said that I almost clammed up entirely—only speak the little language English that I knew. And now at my age I'm trying to recover my Korean so it's kind of an interesting story. But we had this idea, my ideas, my views at least, we as children, who'd never been to the US, had this idealized view of America, when we saw the covers of the Saturday Evening Post, Norman Rockwell paintings, very America, white picket fence and friendly little communities and things like that. And so that was, you know, my views of things, the few things that I had harbored all my childhood.

And so when we came to the US, when we came to Los Angeles, it was a rough time. I was about 12 years old, and just lost my father, we had very little money and were living with the support of relatives initially. Um we lived in kind of- it wasn't in the city, but it was little rough. And I went to school with rough kids and the first few months that I was going to school, I had to have fights with other kids and the teachers came down on me because I looked different, dressed different. You know that was funny. When I was in school in Japan, we wore our shirt-tails out because you had to run around and it's just easier to wear your shirt-tails out. But in Los Angeles when we were in middle school, wearing your shirrtails out was some kind of gangster move or something. So, the teachers and the vice principal would come down on you for this kind of behavior, you know. So, all kids do it, you know; they have to contend with their peers and establish their position in the social order. So I don't know, kids figure it out. But I was skirmishing with other kids physically. This went on for months.

Um, and the teacher are obtuse. There— this middle school, there's this kind of school in semi-inner city, the teachers principally interested in behavior control. So, it was really embarrassing you know. My mother is Korean. She was so respectful of Ame— of the institution and being in America. And so, when I had to go to school for the first time, and this happened about 3 weeks before Christmas, 1962, barely a month after my father died, she took me to school in a suit. You can imagine, arriving for your first day of school, in a rough middle school wearing a suit. But that's— my mother said, "You have to wear a suit" So I went to school in a suit. And so, I went off to classes in my suit. And I even had to do physical education. Now at the day I arrived, they had a, set of tests, you know sort of PE test. You have to throw a ball and run around the bases and do all this nonsense. And the fact that I was wearing a suit and leather shoes didn't bother the coach at all. He said, "I don't care what you're wearing, you're doing it." So it was terrible. I was lucky to get out of there with my suit in one piece. And so that kind of got me on the wrong foot with the other kids but you figure it out. Um but the— It was not the Saturday Evening Post. It was not the white picket fence. And then after school I had to do all this skirmishing and scrabbling with other kids. Yeah well, but kids figure that out. Bloody noses, few bruises and it kind of settles down.

**AD:** So could you talk, talk about the progression of your career? Because it seems like you've explored multiple professions.

**DF:** Yeah, I think we talked about that earlier. [**AD:** Mhm] Um, you're— when you're young you just don't know enough. Some people do but most kids don't really know enough. And if they— it's not surprising that one should change your mind, if you're lucky that happens before you graduate from school, and you know, you head off for preparation for your career. But if it takes another try or two or three, it really doesn't matter in my view. You should be doing what you wanna do. And that can happen

later in your career as well. If you need to be doing something else, it's a great privilege to do that. Most people have to work to survive and it's not given to them to have such an opportunity to change their career, change their preoccupations. Um, but I was— I made some changes around when I was young enough. Um but as it was, you know I started medical school at the— roughly the age of 28, which is about seven years behind schedule. And I started my residency at the age of 31. But interestingly enough, I was not the oldest person in my residency class. There were 2 people who were older than me. And a number of people who were almost older— as old as me— there were a number of MD PhDs who had done research, and now they were doing medicine as part of their training. There were a number of people who were in other careers in medicine, some nurses that had gone through a career in nursing and turned to medical school.

Um so there were several of those people and there was actually in my class the oldest person, the guy was 37 or 38 when he started. And he was a priest and somehow got interested in doing medicine and went on to do that. So, there are plenty examples of this among people that I've worked with of- finding a different path, or at least continuing the path to a different place in your career. And you know I will say this again: It's a great privilege, it's almost a luxury. But if you can do it, you're just trying to do the thing that you want to do every single day. And even late in your career if something interests you, and you have the ability to do that it's worth it. It's worth the work. It's worth sometimes dislocation of your psyche, or the dislocation of your living circumstances. People do it all the time: they become writers, build different things, they go into business. Um, so it's not merely an exception. It's kind of an unfortunate convention that people are forced do the same thing for their whole lives. And I think you'll see that even when in a single field, most people can't live like that. They have to progress. They have to change. They have to learn new things. They have to become managers. They have to become project managers. They have to become something else. Um, and it's all in the course of developing what they already know into some extension of competence.

**AD:** So can you tell us about the hospitals you are working at and your positions there?

**DF:** I work at a private university hospital. It's a private hospital meaning that it's not owned by a public concern like the county or the VA or something like that. So in that sense, most hospitals, despite the services they provide and the contracting which they do, are private hospitals. It was the home where in 1957, Denton Cooley established the Texas Heart Institute after leaving the Baylor College of Medicine. And that has been merely the informing institutional history even 'til this day. And then it thrived that way, a very rich history of a lot of firsts in cardiovascular medicine, cardiac surgery, transplant surgery. I arrived in 1990 having left the Birmingham Women's Hospital where I was on academic staff, there for 3 years, and for complex reasons decided to leave. And I got this job here at St. Luke's Hospital, St. Louis Episcopal Hospital in those days doing cardiology. Um, and it had what I considered essential combination of duties for me which is that I got to do the practice of medicine and cardiology independently. Second, that I'd have the opportunity to conduct research on my own time. And third that it had a teaching program in which I could participate as a teacher. So, those things are usually available if not actually enforced at an academic hospital. And academic hospitals can be private hospitals or—as well. But, it's difficult to do it in a private setting because principle obligation in, in practice is to build a practice, see—develop a lot of patients in your subscription and thereby make a comfortable living. Um, and the taking the time away to do research or to teach sacrifices time from your practice of medicine. But that, if you have the independence, you can do that.

So, I really enjoyed that a lot, and eventually become—became the director, program director for teaching interventional cardiology at the institution. This teaching program was called Baylor Program 2, so the academic investing academic authority was the Baylor College of Medicine but we were not Baylor faculty in that we were not paid by Baylor or directed by Baylor. We were volunteer faculty, and many of us prefer that to maintain our independence and to direct our own research efforts. Um, we developed



many important things in the past twenty, thirty years. Um, we helped develop the vascular stenting enterprise, we developed means of stenting and treating blocked arteries in the body and in the legs. We did—helped develop the treatment of aneurisms with catheters, and this all was done as private physicians, who were volunteering their time to do the research work. Uh, so it was a great combination and I still enjoy it to this day.

**AD:** So, what is your one favorite thing about your job?

**DF:** Teaching.

**AD:** Um, and how do you usually interact with your patients? Do you strictly keep your relationship professional as doctor and patient or do you treat them like friendly in ways? And uh—

**DF:** Well you can be professional and friendly [**AD:** Mhmm], you know. That's [**AD:** Yeah]... it's the—ultimately, these interactions are person to person and both yourself and the patient will respond like a human being 'cause you are human beings. So, you have to behave like a human being. Yeah the things that require professionalism are not inhumane, they require the professional and—professionalism requires respect, honesty, and competence. And there's nothing about those things that requires that you're a cold person. Um, you know, most of what we do, as I say, ain't rocket science. Most of what we do is well-understood and the application of that knowledge in practical form requires, the one thing it requires more than anything, is empathy. And I tell my trainees, I said, "all you gotta do to know what the right thing to do is, is to pretend that's your mother on the table. Because it's somebody's mother. You will know instinctively what the right thing to do is, you'll know when you're off base. All you have to do is care; and unfortunately, not everyone cares. And even simply allow yourself to give a hoot what happens to that person, it makes your judgement much more acute."

**AD:** So do you think that your cultural identity and the way that you interact with people in your community when you were younger affects the- your work in a way?

**DF:** That's kind of a complicated question, you say when, how, [**AD:** So-] when I was younger [**AD:** Yeah] how I interacted...

**AD:** With like the people in your family, the people in your community, does that affect the way that you interact with your patients?

**TS:** Kind of like, how does your cultural identity [**AD:** Yeah] inform your work?

**DF:** It doesn't. Um, with the possible exception of- that it makes you sensitive to... the fact that not everybody's experience is easy or straightforward. You can have some sympathy for what people go through, even though you don't know about their struggles, I think having your own—having had your own struggles... And some of that in my experience has been the challenge of cultural identity when I was young. That awareness allows you to be a little more sympathetic for what people go through. Uh...when I came to the U.S., being half Korean and Jewish was an issue at some places. And in middle school, I was always scrapping with kids who called me a Jap. And obviously the point wasn't to explain to them in middle school what the distinctions were, right? You just had to slap a little respect into people. So, that's—those struggles and, ...being pelted with trash when I was at Jewish camp one time, by the towns people. You know, these things raise some general sensitivities in the matter, so everybody goes through something. Um... and... I wi- would admit that it kind of informs your sensitivity to what other people may be going through.

**AD:** So, do you happen to know about any differences between the medical practices in the U.S. and in Korea?

**DF:** Yeah, well my cousin actually is a physician. She's an obstetrician gynecologist, and her husband is a plastic surgeon. So, yeah, I understand a few things about it, ... they're not as richly paid as physicians in the United States. There are opportunists, as—there are, in medicine in the United States, but I think there are probably fewer of them. Um, they work ... very hard, probably harder than physicians do on average in the U.S. They have far less time off than physicians in the U.S., so far as I've been able to tell. And, they're—in my, my cousin's case, she and her husband are independent, they work for a university hospital. But I think they're independently contracted, so they're not essentially owned. So they can have private clinics on the side, for example and a lot of physicians do that because in mostly in their hired positions they aren't paid very well. So... on average though, I think that physicians are- as they are in the United States, they're paid about average compared to everybody else, right?

**AD:** So, what do you say would be your most significant challenge you have faced in your career?

**DF:** Well, I've been very lucky. I've had very few, you know, high level challenges. The exception that, excuse me one second ... When I came—when I left academia, you know, I got a job at the Brigham and Women's Hospital like an academic appointment, junior faculty. I was well established on that track and I had a five-year grant from the NIH, I had my own lab, I was doing all the things you're supposed to do in academic medicine. And I was not kind of getting traction in my position or in m- the things I wanted to do, and that was kind of a challenge. And so I made a *big* career change. I took a sabbatical year and went and learned some other field of endeavor and meant to continue doing that back at the Brigham and Women's Hospital. But, other opportunities came up. And so, we relocated—that was really the biggest change. We kind of have this—I had this fond notion of doing science as well as medicine, and in some ways you can do that. But in the particular field of science that I was working in, it's not practical, not really true. Because you have to compete for grant funding with other investigators and other teams that are doing it one hundred percent of the time. Um, whereas you have to go do—you're only given four months of protected time in your calendar and the rest of the time you have to be doing clinical service for the hospital. So, it wasn't really working out, and so I had to ask myself, "are you gonna do science, or are you gonna do medicine?" And, you know, I'm—confronted the obvious experience that I had done engineering and it was lonely. I wanted to work with people, so I could go back into the lab, do that all the time, but it would be the same thing except for a different set of scientific problems. And so, I surrendered that and pursued doing clinical medicine.

**AD:** So, did you have any goals or ambitions when you were in the medical school? And how far do you think you are right now in achieving them?

**DF:** When I was in medical school? Yeah, I thought I was going to be a professor of medicine and do, science and all that stuff, the MD-PhD thing. Um... but you know, those are just kind of shells, they're kind of titles, they're characterizations of your involvement. But they're not the essence of what you're doing. You know ... people who really contribute, in the sense of building something new or discovering new, typically find some problem, some area that just are so interested in they can't let go. That's distinguished from, you know, doing—let's say clinical medicine as a service, but... new knowledge is happening all the time. And in medicine it's—it's built sort of like a priesthood, so, you know, the senior people tell the junior people what to do and then junior people tell the trainees what to do, and it's this kind of hierarchy. Um... but, the problem is that, you know, the people at the high end of the hierarchy don't necessarily know everything. And they're telling the junior people, who may know more in certain areas, what to do. So there's this disruption of the hierarchy I think that is essential to pursuing new matter and new knowledge.

You kind of have to—if—my advice to younger people is: when you find that thing that you're really interested in doing... listen to yourself. You know, if that's what you would like to do every day, if that's what really, kind of... you wake up in the morning thinking about doing and drives you to invest effort and time and... then, you know, you're lucky. That's the—*those* are the things that really change the world. So that people are sucked up by something that drives their efforts.

**AD:** So, so you are currently working in Houston, which has the biggest medical center in the world, meaning you are able to work among all the most advanced medical technologies and convenience, so I'm curious have you ever thought of moving to another city or community where the medical service is less accessible? Um, and to reach out to more, you know, under privileged patients?

**DF:** Yeah, I... I think of what I do very selfishly. I don't worry about reaching out to under privileged patients, per say... I worry about doing what I do for the people who are in front of me correctly. My politics are very liberal, my own belief is that the—that medicine is not necessarily a right that is conferred by our laws, because it requires the conscription of effort on the part of other people, so in that sense it can't be a right. But I do think that it is in an informed and enlightened society it is an essential part of what society should provide. I believe that medicine should be restructured to provide for that. Right now, you guys don't know about all this but, medicine in the United States is essentially a machine of self-interests where insurance companies, drug companies, healthcare companies are making a lot of money from patients. So, in that sense, patients are conscripted by marketplace entities in order to generate profits. So, the purpose of a health-care company, oddly, is not healthcare. Now, that is not to divorce their competence from the discussion, their competence at delivering medicine is something that presumably they would be... rewarded for which is the paradigm of success in a private company, to do what you're supposed to do successfully and thereby profit.

The problem is that even incompetent companies will profit, they've architected the system, the laws in Congress, in order to achieve that. And my simple view is there has to be an entity that undertakes the delivery of medical care for the purposes of the delivery of medical care. Um, there's no such thing yet, the federal government through its programs of Medicare and Medicaid are in part, undertaking some of that responsibility, but the system is just going to get more and more expensive, people will struggle, I think, at the root of it to gain the medical resources they need at a fair price. But what I do every day, I just try to focus on what's in front of me. And maybe as I evolve, I'll start considering what else I might do. If I were to retire, for example, and my responsibilities were no longer owed to a business entity, then perhaps I would consider doing those things. The medical center here is hugely rich, obviously, it's one of the largest single-site employers in the world and it's an enormous facility. But, when you've done medicine for a long enough time, you will appreciate that medicine is regarded as a local resource by most communities. Most people, they don't want to drive two hours to the medical center and get their care. Now, understandably, if—they had some life-threatening thing, they needed a transplant of an organ, that's not done at the community level.

But, there's contradiction in that because the medical enterprise doesn't make money from those things. It only makes money from the ordinary things. So, to the extent that the medical center is abandoned in favor of community care for the ordinary things, then the money will leave the major centers and be—go into the community centers. And then that will leave the most expensive and money-losing enterprises in high-level medical centers like Texas Medical Center. So, it's a looming contradiction that is very difficult. Ultimately, it's everybody scrabbling to get patients to come to their facility: whether it's your local doc in the box or your major medical center.

**AD:** Do you have any questions?

**TS:** Um, yeah, but it kind of takes us away from the focus on career.

**AD:** Okay, so you can just jump in whenever you have one [laughs].

**TS:** Okay.

**AD:** So, so how do you like to identify yourself, do you identify yourself as American, Korean-American, Jewish... something in-between?

**DF:** Mmm, I have a name. [**AD:** Oh, okay] None of us is pure anything. About 65,000 years ago, the entire human race was decimated. It was reduced to about 2,000 families that lived in what is now sub-Saharan Africa. All of humanity, on the planet that we know today, the five to seven billion people, came from those 2,000 families. They spread all over the earth, they differentiated, and this is not the process of eons, this is 65,000 years. A lot—a long time, but in the course of life on the planet, just a blip. And in another 65,000 years, we're probably all going to be mixed up again.

I, when I was younger, I just identified with myself. I was just trying to survive, I was trying to do the things that all kids are doing: gaining acceptance, you know, find people who liked you, have fun with other kids, do the things where you could be socially accepted. Um, I was not in the business of either proclaiming or acknowledging my sort of mixed background. That's not the business of childhood, really. Is it? And, there are a lot of things that make me sad about that 'cause when I was younger I was so caught up in myself, as we—so many of us are, and they were not the sort of widely available community associations or, you know, Facebook groups, or social media groups, or to encourage or participate with that kind of distinction. So, in one sense I either ignored or even repudiated my background... as Korean. And, a lot of things are sad about that because it separated me from my mother in that sense. Of course we were close in an idealized sense but I didn't spend, you know—where she lived in Los Angeles as I lived in, in the Boston area and didn't visit nearly very much. It was very difficult and expensive to visit. But that's not an excuse. Um... so, it was that kind of sense of separateness and the fact that I didn't really embrace a unique identity in a community sense. So, that—that I think kept me apart from my mother. She was the only one that spoke Korean to me, even a little bit. So I... didn't have the language. And then she died when I was about forty, at a relatively young age. And so much about her rich history and the back—background story of her very difficult life was lost to me for many years. And then I ultimately went to Korea, in my older life went to visit a number of times and kind of reconnected with all of her family and then learned more about what happened to her and what her life was like. So, in that sense, yes... having the urge to—that—that urge to identify or to embrace your unique identity was displaced by other concerns when I was young and that's regretful. So, most people, you know, who have their families close or closer than I did wouldn't make that mistake. But I think I look at it as sort of ... a long disruption from the time that we lost my father and we moved to the U.S. and it was all together alien in experience until ultimately, I had to grow up. And then, having grown up, and had a family of my own, then you try—you begin to feel these things again and readdress them.

**TS:** So, do you think moving to the United States helped you in the process of reclaiming the biracial identity? Or do you think it kind of helped you disconnect?

**DF:** Well... I was really young, you know, I was eleven, almost twelve. And... I think that, having your life disrupted at that time creates a dislocation that you—that kind of displaces all your other concerns for so long. So, no I don't think it helped me [laughs] it didn't help at all. It was... if anything damaging to all those prospects for retaining and embracing a cultural identity, that's very rich.

**AD:** So, what do you think about the stereotype that a lot of people are talking about: Asians being premed in schools and the common expectations of Asian parents wanting their kids to be either doctors or lawyers or engineers? Do you experience the same thing in your family?

**DF:** In my family, yeah! Sure, my father was an engineer and, you know, when I was born in the middle of a war in a mud hut and my mom said, “my kid’s going to MIT!” I mean [laughs] how Asian can you get? [TS laughs] Right? But I’ll—I—I think I’ve thought about this before actually, and I think that part of it has to do with a long history of generational insecurity. Technical professions, science, doctors—you know—professionals; those are the people who were in the seminal communities of all Asian cultures. Those were the people who had power, money, a nice house, you know except maybe the rice merchant or something, but those people in general commanded power and success in the community.

And, you know Korea was occupied, by the Japanese from 1905, I think, ‘til the end of World War II. Um... and if you look at the modern history of Asia, ... the... the tragedy that—the disruption, the calamity of the generations in the last hundred years is, is universal. It’s China and Japan and Korea and the Philippines and Southeast Asia and Vietnam. And in—when you have this kind of disruption, what do you want for your kids? You want—you want your kids to be the best philosophers or the best, you know, poets or the best sales people? You—you—what you *want* is respect, power, and money. You want security for your children. And modern Asian history is *hugely* disrupted. Um... so people wonder, for example, how Korea could go from essentially an agrarian, backward country to an enormous economy. They did it through technology. They didn’t do it because every child born want- was sent to be a philosopher; they were able to do it because in a small country without many people, they focused on technology, competence, science. So, it’s a small wonder that this is what the convention is for Asian parents. Now... it’s not necessarily true that that’s always the best thing for an Asian child. But I acknowledge the forces that are brought to bear on that child.

**AD:** So would you say that you have the same expectation for your children?

**DF:** No, so I’m kind of post-generational Asian in that I had the luxury of success and not the weighted expectation. So, I was able to encourage my child to do whatever she wanted.

**TS:** Um, I kind of wanted to jump back and ask a question about your life story? You mentioned that you met your wife at MIT, I believe?

**DF:** Yeah, she was not at MIT she was at Boston University [TS: Mhm]. She had come she li- was from Houston, and she’d come to Boston to do her graduate work. So she was at Boston University doing a masters in literature.

**TS:** And then could you tell us a little bit about how you guys met?

**DF:** Yeah, it’s gonna sound weird but [TS: laughs] it was love at first sight, actually. I was invited to go to an engagement party for a former girlfriend, who I did meet at MIT and she was this brilliant woman and she was engaged to this guy and she invited me to her engagement party. Anyway, she lived in this apartment on Beacon street... and had invited her downstairs neighbors to join them at this party. And these neighbors were two women from Houston, one of whom was ultimately my wife and I just walked in the room and took one look at her, and was completely fascinated. And apparently, and I don’t know why, but apparently, she felt the same way. You know, so, there were a lot of fits and starts in the practical details but that’s how we did—we met.

**AD:** So, if your great grandchildren were to watch this, what would be something you hope they would know?

**DF:** Oh, good question. Um, I hope that my story would let them understand that life is a gift and I’ve been gifted through enormous sacrifice on the part of my parents who had very difficult lives. I was gifted

a life of great luxury and privilege, and I hope they would understand that I am aware of that and that I'm grateful for it.

**AD:** And do you have, like, any advice for prospective medical students after like a—a varying like non-traditional path of your career?

**DF:** Yeah. Medicine in the future is going to be largely done by robots... and AI paradigms and things. But if you're going to be a doctor... what are you bringing, then? It better be yourself. So, if you are interested in the subject and want to pursue all of the great things that it does—that you can do when you're in medicine, you have to find what you yourself are uniquely going to do with it. You have to bring yourself to the party, and when you go to do a, admissions interview, you have to bring yourself: fully, honestly, enthusiastically. You have to feel who you are, understand it, embrace it, and have enthusiasm for it yourself, right? And, by the way, enthusiasm in its derivation means the love instilled by god. So whether you're religious or not, you have to feel that you're bringing yourself to the whole enterprise. Um, I used to in medical school, and then later, I used to participate in these outreach programs that coached people in how to interview for medical school or other things. And, at present, I'm the program director for interventional cardiology and we- in my position I'm also on the admissions committee for the training program. So we interview, you know, maybe 70-80 people a year for the fellowship positions. And that's what we look for. We look for someone who is genuine—genuinely themselves, comfortable with themselves, and enthusiastic about what they're going to do.

**AD:** [to TS] Do you have any questions?

**TS:** Yeah, I just kind of wanted to ask what are your hopes for the future? Whether that be personally or just in general.

**DF:** My hopes—well personally? I don't know, I pursue my hopes every day. I'm trying still... I—I've been playing the guitar since I've been—I was ten, and I'm still trying to learn how to be better after, you know, 60 years [laughs]. I'm trying to learn Korean again. Um, I have a couple of companies that I started when I was doing development and—on medical devices. And I hope that, you know, they will succeed and I will continue to help, help them succeed and bring my abilities to bear on new ideas. That's my hope for myself, that I get to keep doing original things. We're all original people, and the best thing we can do is to bring our originality to do original things. I've been so lucky in my life. I could have been in any state of misery you could think of all these years, but I've been very lucky. Um, so, of course you all—we'd all like to have grandchildren and all that stuff but, yeah for my own self I want to die in the saddle. You know, just keep... doing things, creating things. I ask myself, actually almost every other day if I'm just in a quiet moment, I will ask myself or kind of exhort myself to produce. I actually use that word, I said, "What are you doing to produce? Okay, yeah you had lunch, now you have to produce. What are you going to produce?" That's just—that's just me. It's kind of nuts, but that's... And not everybody's comfortable with kind of, that kind of ambition but it's fun. It's really fun to—to do new things, think about new things, and challenge the state of knowledge, you know. That's the nice thing about medicine.

When I graduated from my fellowship, it was 1987, ... we learned in the same dogmatic way that everybody learns in medicine just because of this hierarchy. So, yeah, you learn the books; there's a stack of books, you learn that. You know, and your supervisor or your professor will say, "This is true, and that's true, and this is what you do, and this is what you don't do," and you listen to all that. But, 20 years later from that everything changed. Not a single thing was the same. Not the way we treat heart attacks, not the medicines that are best for heart attacks, not the way we treat all these common conditions, atrial fib- not just the way we treat... but, we didn't know we were killing people. There's a condition called atrial fibrillation where the upper chambers of the heart lapse into an irregular rhythm and this can lead to the risk of heart attack and stroke, and other things. And atrial fibrillation is *very* common. Probably about

20-25% of everybody on the planet will develop it before they leave, and it's a condition of usually older age, obviously, but we used to treat it with this pair of drugs digoxin and quinidine. That was the dogma, we all knew how to administer it and when to check the electrocardiogram, we knew all the chapter and verse of how to handle it. We got it handled. And as trainees we learned how to do that. Well, one of my fellow—fellow fellows, that's in my class, her name was Pat Cole, she did this research, shortly after we graduated, that proved that treating atrial fibrillation that way was killing people. That they were actually far better off not being treated in that way.

And that's emblematic, we used to treat people for this condition called ventricular tachycardia, in which the—because of damage to the heart usually from things like heart attack, the heart rhythm would become disturbed and a very fast rhythm could ensue which could have the potential to become lethal. So, that's a bad thing. So, when you got a bad thing, you try to make it better. And so, you use the tools at hand, we used all these medicines that we knew affected the heart rhythm, sometimes we'd give ten drugs in cycle just to figure out which one would work. And it turns out, from a study that was published when I was, also about that time a senior in my cardiology fellowship, turns out that was killing people. All of them [the drugs]. And so, it goes, and everything since that time, not just in the way you treated people but the underlying principles, the understanding of the physiology and the chemistry, and the models of disease, all of it changed. Nothing was the same. So... did that happen because people said, "Oh, well my professor told me I should do it this way, and that's the way I'm going to do it." Is why things got better and we changed things? No. It's because people were curious. People asked themselves, "Well, where's the proof of that? Let me go find out." Or they had a new idea about the things they were doing. Completely changed. And 20 years from now, it will also be completely different. And my advice to young people is: everybody wants to predict the future, but it can't be predicted; it can only be built. So do it.

**AD:** Any more questions? **[TS: No]** So, I guess we can finish the interview right now. Thank you so much for coming here today and sharing with us your stories. We really enjoyed this interview.

**TS:** Thank you.

**DF:** Okay, thank you very much.

[interview ends]