DAVID M. KELLEY

An Oral History Interview

conducted by Judee Humburg

STANFORD ORAL HISTORY PROGRAM

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Introduction

This oral history was conducted by the Stanford Oral History Program, sponsored by the Stanford Historical Society and the Stanford University Archives. The Stanford Oral History Program is under the direction of the Oral History Committee of the Stanford Historical Society. The interview was conducted in 2012 by Judee Humburg, storyteller and Stanford alumna. The transcript and recording are part of a collection of oral history interviews documenting the history of the University and the experiences, accomplishments, and viewpoints of members of the Stanford community.

The transcript was lightly edited by program staff and by David M. Kelley to correct grammar and occasional inaccuracies and to aid in overall readability, while maintaining the interviewee’s voice as well as the substantive content of the interview. As a result of this process, the transcript does not match the recording verbatim. In the case a substantive deletion was made, it would be so indicated where appropriate on the transcript. The oral history itself is an authentic account of the remembered past, but as memory and meaning vary from person to person, the interview may inadvertently include factual errors or discrepancies.

All uses of the interview transcript are covered by a legal agreement between David M. Kelley and the Stanford Oral History Program. The transcript is thereby made available for scholarly purposes in the Stanford University Archives. The copyright to the transcript including the right to publish is reserved to Stanford University. No part of the transcript may be quoted for publication without the written permission of the Stanford University Archivist or his/her representative.

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The Stanford Historical Society's Oral History Program explores the institutional history of the University, with an emphasis on the transformative post-WWII period, through interviews with leading faculty, staff, alumni, trustees, and others. The project furthers the Society's mission "to foster and support the documentation, study, publication, and preservation of the history of the Leland Stanford Junior University."

The interview recordings and transcripts provide valuable additions to the existing collection of written and photographic materials in the Stanford University Archives. In addition to scholarly use, information from these interviews may be shared more broadly through print articles and campus lectures. The interview materials are also made accessible online.

Like any primary source material, oral history is not intended to present the final, verified, or complete narrative of events. It is a unique, reflective, spoken account, offered by the interviewee in response to questioning, and as such it may be deeply personal. By capturing the flavor of incidents, events, and personalities, the oral history approach provides details and viewpoints that are not often found in traditional records.
In his interview, David M. Kelley spoke at length about the development of the d.school, Stanford’s School of Design. He expressed his passion for guiding students into greater creativity, and for the philosophies promoted by the d.school, including design, creativity, and a dedication to interdisciplinarity. Kelley gave examples of student projects, such as improving the design of ballet slippers or snowshoes, and spoke of his own design work as well. The interview also included discussion of Kelley’s other work at IDEO and an earlier company known as the Intergalactic Destruction Company. Kelley explained his arrival at Stanford and the path he has traveled in the Stanford academic community, and proposed some thoughts about the future of creativity at Stanford and the d.school in general.
David M. Kelley

Biography

As founder of IDEO, David Kelley built the company that created many icons of the digital generation—the first mouse for Apple, the first Treo, the thumbs up/thumbs down button on your TiVo’s remote control, to name a few. But what matters even more to him is unlocking the creative potential of people and organizations so they can innovate routinely.

David's most enduring contributions to the field of design are a human-centered methodology and culture of innovation. More recently, he led the creation of the groundbreaking d.school at Stanford, the Hasso Plattner Institute of Design.

Kelley was working (unhappily) as an electrical engineer when he first heard about Stanford’s cross-disciplinary Joint Program in Design, which merged engineering and art. What he learned there—a human-centered, team-based approach to tackling sticky problems through design—propelled his professional life as a “design thinker.”

In 1978, David co-founded the design firm that ultimately became IDEO. Today, he serves as chair of IDEO and is the Donald W. Whittier Professor at Stanford, where he has taught for more than 25 years. Preparing the design thinkers of tomorrow earned David the Sir Misha Black Medal for his “distinguished contribution to design education.” He has also won the Edison Achievement Award for Innovation, as well as the Chrysler Design Award and National Design Award in Product Design from the Smithsonian's Cooper-Hewitt National Design Museum, and he is a member of the National Academy of Engineers.

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1 Biography taken from IDEO profile. URL: http://www.ideo.com/people/david-kelley
STANFORD UNIVERSITY

PROJECT: STANFORD ARTS INSTITUTE ORAL HISTORY

INTERVIEWER: JUDEE HUMBURG

INTERVIEWEE: DAVID KELLEY

DATE OF INTERVIEW: OCTOBER 22, 2012

Humburg: This is Judee Humburg, and I'm interviewing Professor David Kelley on October 22, 2012. We're in his d.school [School of Design] office on campus, and this is part of the Oral History Program for Stanford Historical Society. This is our second start. I've actually now pressed really firmly on that recorder. Before we talk more about your Stanford career, I'd like to back up a little bit and have you talk about your path to Stanford. How did you happen to choose Stanford?

Kelley: [00:00:31] I was raised in a small town in Ohio. First the earth cooled, the dinosaurs ruled the earth, and then they were extinct, and then me.

[Laughter]

Humburg: [Laughter] Skip forward to the 20th Century.

Kelley: [00:00:46] [Laughter] I went to a small kind of not very college preparatory kind of high school. I went to the guidance counselor and I said I want to go to a really good engineering school, because I was this kind of kid that took things apart and really enjoyed making things and welding bicycles
together, and stuff like that. He said that, from this high school I really
couldn’t go to a good engineering school, that the only choices for me were
Akron U or Bowling Green. These were the two nearest colleges to my
hometown. This was the guidance counselor. Sitting here today, I have no
idea why I ignored him. I was kind of like a follow-the-rules kind of kid, so
I can’t imagine why I—

**Humburg:** Back then you were.

**Kelley:** [00:01:32] Yes, I was. I ended up going to Carnegie Mellon, [laughter]
which I guess was a reasonably good engineering school, and I was an
electrical engineer. I don’t know why I picked engineering. It was the
wrong fit for me. I probably should have picked mechanical, but I picked
electrical for some reason. I didn’t do very well in school because, again, it’s
about fit. That’s what I care about my students now, is trying to find their
fit, you know, in their major or in their profession. I came out kind of a bad
electrical engineer.

[00:02:07] [Laughter] I went to work at the Boeing Commercial Airplane
Company as an engineer and, later, National Cash Register. In life, I think
my big break happened, when I was at Boeing and I was in a carpool. It
was 1973. It was the gas crisis. I don’t know if you remember the gas crisis.
We were sitting in lines, and you could only get gas on every other day. It
was really a funny time. Anyway, so I put up a sign; [it] asked if anybody
wanted to start a carpool or ride in a carpool together. We were riding quite
a few miles to Everett, Washington from where I lived. A guy answered the
ad named Bill Potts. Bill Potts, who remains one of my best friends to this day, answered the ad. He had just come from Stanford.

[00:02:55] Where I was going from Carnegie Mellon to Boeing, he had just come from Stanford to Boeing. He was fresh out of this program, the program that I’m now in charge of, called Product Design at Stanford.

We’d ride in the carpool and as he got to know me, he kept pestering me to apply to Stanford in this program. He said, “This program’s perfect for you. This program’s absolutely perfect for you.” I said, “Bill, you don’t know how bad my grades are. You know, I’m not really that—you know, Stanford. I mean I can’t get into Stanford. Besides, I want to make stuff. I want to do stuff. I don’t want to go back to school.” Anyways, he pestered me, and he really did pester me to the point that—and, the other thing was, I saw how good he was—I applied to Stanford and got in.

[00:03:43] So [the Product Design Program] was the right program for me, and, it changed my life. I mean I’m probably a professor here today because I feel like I owe Stanford something for that—finding myself because of this program. The program is unique in the world.

**Humburg:** Tell me about the Product Design Program. When you were applying to the program, what was it that prompted you to think it was a good fit for you?

**Kelley:** [00:04:10] The Product Design Program is kind of the *human* side of engineering. Where many people on the technological side think they’re going to kind of come up with a technology and then convince people what it’s going to do for them, we believe in this stuff we call “need finding,”
which is to ask “what is a project worth working on [given the needs we identify]? What do people really want?” Then we try to use the technology to solve that. We just come at it from “what’s the human-centered way to do it?” Then we apply our engineering or our technological or our business or whatever [knowledge] we’re going to apply to that [human need].

[00:04:45] The reason I was intrigued by it, and the reason it did actually fit for me was I wasn’t the most technical person, but I really had this passion to do something that would work and that people would actually use. Right? Whether it was building a tire swing, or whatever. I mean, I care about the bearings and the rope and stuff, but I was really into [understanding] what’s the ride going to be like. Is [the tire swing] the right height? Can a kid get on it? How do you get off of it, that kind of stuff? It fit me because of the human-centered [point of view]. The other thing is all programs that I knew about in the world were very technical and analytical.

[00:05:35] This is a master’s degree in engineering. Right? If you went to MIT or Stanford or Cal Tech, what was really macho was how technical the program was, like the people that were really good at it were going to become a Ph.D. and do research. That didn’t fit me because I wasn’t much about reading or writing. Then, the other programs that had the word “design” in them—and I was drawn to the word “design”—these programs were in the art schools, and I didn’t think I was that talented an artist. I felt more creative than your average bear, making Christmas presents and stuff. [Laughter] But I certainly wasn’t a drawer or a painter.
[00:06:21] The Stanford program kind of embraced both those things. It was kind of joint between the Art Department and the Engineering School. What they cared about, or what we care about, is the process of how you come up with things, how you innovate. We talk about "innovating routinely." We have this kind of creative confidence that no matter what the situation is, our way of doing it will result in some unique product or service or experience.

**Humburg:** How long were you in the actual Product Design Program?

**Kelley:** [00:07:00] I graduated from Carnegie Mellon in ’73. Then I went to work for Boeing for a year. Then I worked for National Cash Register. I started Stanford in 1975. It’s a two-year program. In ’77 I completed my master’s project, which was called Medical Passport. [Laughter] It was before digital media. I went over to the Medical School, and found Dr. Sachs.

[00:07:38] I don’t remember his first name. Anyways, initially I was talking about something else, about some kind of disease thing I was interested in. But he said if you want to see a really good problem to work on for someone like you, he said look at this. He took me in the basement and he showed me the medical records. It looked like that thing in Raiders of the Lost Ark. That’s really the way it looks if you go down there. I mean it’s really amazing. He said to me, “You know what happens if we misfile one of those manila folders?” I said, “No.” He said, “We never find it.” Right? Then I got into all the nuances of medical records. [00:08:17] Anyway, to make a long story short, my solution to the problem, my master’s project, was this big microfiche machine. Took me forever. Every time you went to
the doctor, you inserted a piece of microfilm, you know, microfiche, which was a microfilm in a card into the big machine and, and, it would upgrade the microfiche. I called it a Medical Passport because you would get to keep it. You carried it with you.

[00:08:45] So it made you in charge. Now, the hospital had a copy of it, but you were in charge of your medical record. Having moved around a lot it was really hard then to get your medical records to move from one place to the other. [Laughter] The silly thing is that it was a microfiche; it was a photographic process, so you put this film in it, and then the doctor would put whatever they’d written on [into the machine], and it would actually photograph [the writing] and attach it to this piece of plastic.

[00:09:15] We weren’t very many years away from magnetic media. At that time, hard drives and floppy discs and all that stuff weren’t around yet. So [the project] was totally bogus by the time I got done with it. I learned a lot about the human side of people’s medical records and their problems. So now they’re all scanned, of course, and you can do things better [than what I designed]. So, that’s a long answer to your question—from ’75 to ’77, I was at the [Product Design] Program. Just like then, all my students today go for two years. [When I was in the program,] I was a TA, and I decided I really liked teaching. I didn’t have any money. In fact, I still had my Carnegie Mellon loans.

[00:09:59] When I got to Stanford I was still paying them off. The prospect of getting more Stanford loans. [The opportunity to be a Teaching Assistant] was just lovely. Even today we have many TA-ships. We teach
so many classes. I was able to basically pay for my Stanford education. I think I still had to borrow $10 thousand or something. I paid for my education through TAing. But I just loved teaching. I decided I was going to be a professor. I stayed after my master’s to start on my Ph.D., which never went [laughter] anywhere—I mean it was a project. The project was with the VA hospital, and it was about attaching a robotic arm to a wheelchair.

**Humburg:** This was your Ph.D. project?

**Kelley:** [00:10:40] Hm-mmm. I got going on the project. But then it became pretty clear I was going to have to do a lot of reading and writing, and I’m just not good at that. I’m a really slow reader, and writing is really painful for me. So I decided that I wouldn’t pursue the Ph.D. because Stanford allowed me to be a lecturer and teach anyway. I started out teaching right away. In 1978, I got to start teaching. I was teaching Visual Thinking and another course called Advanced Product Design. I’ve never stopped teaching since ’78.

**Humburg:** What did you TA when you were a master’s student?

**Kelley:** [00:11:20] I did two TA’s. I TA’d ME [Mechanical Engineering] 101, which is the big course. We teach six sections of that, so there are lots of TA-ships. Then I was the TA in the wood shop. Now we have this thing called PRI, Prototype Realization Laboratory. The wood shop’s part of that. Back then the wood shop was a separate TA-ship. It was every quarter. It was a plum job to get because every quarter it was just me in the wood shop. It was like my little kingdom.
Humburg: You were building things again.

Kelley: [00:11:58] Yes. Sure.

Humburg: Who was on the faculty when you were there?

Kelley: [00:12:03] My main guys on the faculty were Bob McKim and Jim Adams. But there were plenty of other guys on the faculty. Bernie Roth was still there. Doug Wilde and Henry Fuchs. Ernie Chilton was there. There were lots of people on the faculty. My main mentor for sure, no matter what, was Bob McKim probably. When I write the list of the most influential people in my life, he's like number one.

Humburg: Tell me about that.

Kelley: [00:12:39] Bob McKim, so first, he admitted me, [laughter] so he overlooked my grades. When I asked him about it years later, he said it was my portfolio. While I was at Carnegie Mellon, I had made Spring Carnival floats and stuff. I made a 40-foot-tall jukebox that people walked through and drove on a record. I made a big 40-foot-tall grandfather clock where mice would run up and down the clock for a fairytale thing and stuff like that. Anyway, he said he really liked those projects in my portfolio. That was the reason that he admitted me.

[00:13:24] At Carnegie Mellon, remember I said I wasn’t much of a fit and so I really didn’t excel. Did poorly in school. So I wasn’t really wasn’t favored by the faculty at all, because they were looking for people who would join them in their laboratory and do Ph.D.’s underneath them. That’s the way engineering faculty are oriented. I kind of always felt unappreciated
by the faculty —let’s put it that way. I got to Stanford and there was Bob McKim, and—[snaps his fingers]—boom, like we hit it off.

Humburg: What was it about Bob?

Kelley: [00:13:59] He was super entrepreneurial. He worked for a company outside. He was just this really human guy. He was about the human side of engineering in the same way that I was—it wasn’t about technical excellence, although that was important, just like doing something that was viable from a business point of view was important. He befriended me as a student, for some reason, and it just made all the difference being appreciated. I had lots of time [with him] in his office. He did [that] with everybody. Just like one of the things I feel best about today is office hours.

[00:14:33] I think I probably do more good in office hours than I do in class. He was just fabulous to me. We’d go to his house, and he had a ranch, and I worked for his company in the summer as an intern.

Humburg: Do you remember what company that was?

Kelley: [00:14:48] It was called Chemetrics Corporation, and he had done the [crosstalk]—

Kelley: [00:14:52] He was very successful at that. He was the designer for the company, and I got to meet all the people in the company. To tell you how close we became, remember I didn’t know him from Adam in 1975. He loaned me money to buy my first house. We became very close. Even to this day, he lives in Santa Cruz, I go and see him. Anyway, so he was just right. His form, what he meant by “design,” was exactly a fit for me.
Humburg: Do you remember any a-ha! moments? Because, often with mentors, you have these moments that are pivotal for you for a long time that kind of shift your thinking about something.

Kelley: [00:15:44] It didn’t have to do with design. I definitely had a [laughter] pivotal moment with him, but it wouldn’t have to do with design. In those days, we had these little yellow IBM cards, and you had to fill out your study list on them. You put down what classes you were going to take. We don’t do that anymore, but we did back then, we did. Then you take your card to your advisor and he’d sign it. Bob was my advisor. I took it into his office and I said, “Bob, will you sign my study list?” He looked up at me and he said, in kind of a mean [tone]—and he had never been really mean to me.

[00:16:19] He looked at me in kind of a mean way and he said, “Haven’t you figured out how to forge my signature yet?” Like don’t bother me with this trivial stuff; when we’re together let’s talk about important stuff. It never occurred to me to forge his signature. That would have been like so wrong.

Humburg: You were from Ohio, after all.

Kelley: [00:16:44] Right. I’ve always been a real follower. Anyway, like he said it was all up to me. At that moment, I realized my education was all up to me, rather than pleasing the teacher, which I had attempted to do. I was a graduate student and he was saying—I don’t know how premeditated it was—but he was saying, “Look, it’s all up to you. Figure it out. Do what you want to do. Don’t come to me to figure out your stuff. I’ll help you, but, you have to know [for yourself].” And that’s exactly the way he was. Then after that it became clear, and I noticed him saying it a lot of times. I
would ask, “Well, what should I do for this project?” He would say, “Well, it’s all up to you.”

**Humburg:** Go for it.

**Kelley:** [00:17:26] Go for it. Hm-mmm.

**Humburg:** Wow. That’s a gift.

**Kelley:** [00:17:30] Hm-mmm. Totally. Totally.

**Humburg:** You talked a little bit about leaving the Ph.D. program because you realized teaching was what you really wanted to do. I guess I’m going to jump ahead a little bit only because one of the things that intrigued me when I was reading articles about you was at the start of IDEO it was the whole idea of not managing people, but meeting them. I sense a bit of a connection with what you just said in a way.

**Kelley:** [00:18:02] Yes. I see it as my role to kind of inspire people, not to be much of a manager, or even necessarily a leader. Just kind of inspire them and point them in the right direction. I never felt comfortable being the leader particularly, but things needed to get done. So when I started IDEO—it was also in ’78 [Kelley started Hovey-Kelley Design in 1978, which became David Kelley Design in 1981 and IDEO in 1991]. I started IDEO; I just brought a bunch of my friends together and started this company. I never really thought of myself as leader. I felt empowered that I could get things going.

[00:18:34] It was funny. In the summer of ’77, I started my first company. It was called the Intergalactic Destruction Company because I had one Business School course in my life
Kelley: [00:18:48], and it was with a guy named Hank Riggs, who was a fabulous teacher at Stanford. He said if you have a crummy little company, you need to have a big name, so we came up with Intergalactic Destruction Company. That was a big name. The university was doing a lot of construction, in fact, on some of our [School of Engineering's] stuff, the Terman Building, among others. I got a group of students together, because we didn’t have anything to do in the summer, and two dollars an hour was going to be good.

[00:19:20] We went to the university, to Dean Kays, with McKim helping us, and we said, “Hey, we could do a lot of this stuff and it would be cheaper than hiring real construction workers when it’s just knocking things down.” It’s like destroying the old interior of the building so they could rebuild it. For some reason, the university went for it. Of course, we got shut down a few times by the county building inspector because we didn’t know what we were doing. It was a cathartic moment for me in the sense that I could lead other people, that they would follow me in a way that was not offensive to me.

[00:20:03] I mean I didn’t want to be the boss. But if I could paint a picture of the future that was exciting enough, then everybody would want to do that. That’s always kind of what I’ve done. It’s kind of like a design thing. Right? You paint a picture of an exciting future, and if everybody resonates with that, then they’ll kind of let’s do that. Right? Yeah, let’s go. That’s kind of what I did. That’s how I started IDEO, as well as how I started this
little Intergalactic Destruction Company which was my first attempt at
doing something.

**Humburg:** [Laughter] How much of the building did you actually get to destroy that
summer?

**Kelley:** [00:20:40] We got to destroy a lot of it.

**Humburg:** This was the inside of the Terman Building?

**Kelley:** [00:20:45] No. [The School of Engineering] had two structures. I confuse
this. One was over on Santa Teresa Street where we were taking over a
couple of buildings, which now have become the machine shop and the
design loft. They were for graduate students and they were full of cubicles
that had been built up with two-by-fours and sheetrock, not purchased
cubicles. It had lots of walls. We cleaned both those buildings out that
summer. But in the Terman building all was new.

[00:21:13] It was built in ’77. Funny, it came down this year. So there was
lots of work like building the stage and putting up acoustical material and
stuff. It was really minor stuff, but it was a great job for us for the summer.

**Humburg:** You actually got to construct and destruct.

**Kelley:** [00:21:36] Yes, but mostly destruct. We did get to construct in the new
building for a little bit towards the end of the summer.

**Humburg:** [Laugher] From the very beginning of your teaching career you’ve had a
foot in both worlds with IDEO and your Stanford classes.

**Kelley:** [00:21:49] When I decided I wasn’t going to finish the Ph.D., then I decided
I had to have a job, so I started IDEO, and Stanford offered me a teaching
position from the very first thing. The summer of ’78, I started IDEO, and fall of ’78, September ’78, I started teaching as a lecturer.

Humburg: How did you do that ballet? That’s an incredible confluence.

Kelley: [00:22:17] It’s the same thing. I mean it’s not like there’s cognitive dissonance or anything. In one place, I’m talking to employees about how we’re going to do this design, and in the other place, I’m talking to students about how are we going to do this design, and what’s our methodology and what’s our point of view, and all that kind of stuff, so it was exactly the same. Some of the times it was the same people. Guess who I hired into the company? The only people I knew were my students. Right?

Humburg: I’m going to focus on the teaching for a little bit.


Humburg: Again, I’m thinking back when I was interviewing Nate [Oliveira]. He described some moments that he remembered because of projects with his students that just were really rewarding for him. Do you have any such memories?

Kelley: [00:23:05] I have tons of memories. The thing is that, so all my classes are project classes. Right? In all my classes, from then till now, the students pick the projects rather than me saying to design a clock radio or design a toaster that has four slices. That’s not me. All our projects were like “come up with something that has this meaning to you and work on it.” A ballerina would design a new ballet slipper. I can remember I had that as one of the projects. Somebody who was into windsurfing would do some new way to hold your feet on the windsurfer.
Or somebody who was into outdoor sports would invent a snowshoe. This is Perry Klebahn, one of my students—he had an old snowshoe that had a piece of wood with catgut strung on it. But Perry made a modern snowshoe out of aluminum, and stuff. [Klebahn went on to found Atlas Snow-Shoe Company and later was a founding faculty member of the d.school.] The thing I remember is, see, I’m basically a junkie for that feeling when the students’ eyes sparkle and they’re happy about what they’ve transformed. They’ve flipped to thinking of themselves differently. That’s kind of what I’m after. I remember—and I still have [a memento]—that about this time, I was teaching a class called Advanced Product Design. It was called ME 116C.

You know you’re helping the students a bit, but there’s never really any—like in those days anyways, no student came up to you and said thank you in a kind of a meaningful way. They do now. It’s funny. But the students all took a little piece of their project, a scrap. I can remember there’s a scrap of the ballet shoe, or a piece of plastic off of the little thing they were designing, and they made this big board. They wrote their names and then glued a little piece of their project on it, then they said thanks at the bottom. Right?

It says, “Thanks, Dave,” which is funny, because except for my mother, everybody calls me David. I don’t know where they got that, because they called me Professor Kelley probably. I don’t know where they came up with Dave. It’s funny. Anyways, I still have [the board], and it says, “Thanks, Dave,” [with an] exclamation point, with the course number,
so something happened there that was a clear win. As a teacher, I think some chemical is excreted in your brain when the students are happy. And that did it for me. I really wanted to keep doing it. I mean it’s a funny thing, right?

[00:25:53] I can remember individual projects, and also lots of projects with different students. Some of them went off to become rich and famous or just wonderful designers. It’s funny, when they come back for alumni events and stuff, I can remember every one of their projects. I can’t remember their names very well. Some of them I can, of course, my favorites or people I had particularly close relationships with. But I can remember almost all of their projects. What I usually do is say, oh, yeah, I remember your baby rotator, or cry suppressor project.

Humburg: What do you think it was about that group of students that quarter?

Kelley: [00:26:40] I don’t know. I mean it was pretty early in my career. I was insecure about whether I was doing a good job, or something. It was just validating in some way that kept me going. I don’t [remember anything specific]—

Humburg: Do you recall any incident during the course of the weeks you were together other than just you were wonderfully surprised at the end?

Kelley: [00:26:57] Wonderfully surprised at the end. When it’s all projects, you’re in there with your hands. They’re in the shop and I come out and they say “How should I bolt this together?” I say, “Well, did you try this?” It’s quite an art being a teacher compared to work in some ways because I never let myself help them. [Laughter] I couldn’t like give them ideas or bolt it
together for them, because the learning is for them to do that. Right? It’s like—

**Humburg:** Hands-on, but hands-off.

**Kelley:** [00:27:31] Yes, exactly. I remember when I was a kid; I lived near Akron, Ohio where the All-American Soapbox Derby was. I don’t know if you know what those are. These little cars go down the hill. Always built by their parents. You see them coming down the hill and one slick paint job, the perfect thing, that one was built by a parent. You see this kind of crummy thing with two-by-fours hanging out and stuff, that was a parent who didn’t help them. I always remembered that, and so I try not to get too hands-on with my students’ projects. It’s hard a lot of the times, but, yes, there are lots of projects. If you want to know specific projects, I [crosstalk].

**Humburg:** Well, is there one where you just remember being totally amazed that they pulled it off? It’s okay if none come to mind--

**Kelley:** [00:28:23] There’s lots of them that come to mind, but it’s like the more recent ones are the more powerful ones—

**Humburg:** Sharper.

**Kelley:** [00:28:28] —are the sharper bunch. In the early days—my mind just floods [with memories]. I just re-met this woman, who was one of my students, named Pam Greene recently. [Laughter] She was really out there. One time I went into the shop where the thermo-former was. This is a big piece of heated plastic and then whatever you put on it, the plastic is sucked around it.
Kelley: [00:29:04] Anyways, and she was there, and she had a big fish that she’d bought at the supermarket, and she was [laughter] making these [thermo-formed objects]—and the smell. Anyway, I just saw her [crosstalk].

Humburg: I can see why you remember that. [Laughter] How about collaborations with faculty along the way?

Kelley: [00:29:24] We’ll eventually get to the d.school, I guess. The d.school is the culmination basically of my collaboration with faculty.

Humburg: Then, maybe this is a good time to back up. What was the seed for the d.school? How did the idea develop? Because it obviously took a while for it to form in your mind before you started talking it up.

Kelley: [00:29:46] Oh, yes, it was a long time—lots of years — about eight, I think. I got tenure in 1990. For some reason, that was freeing. I’m not sure tenure’s a good thing if it makes people more focused on what they want to do and not do the common good—do a good job of teaching the required courses, or whatever. I know all the arguments. But, for some reason, [tenure] allowed me to start going out and teaching with different professors. There was something about ‘staying home’. I’m kind of a nervous, antsy guy, and doing the same thing over and over again is not [my nature]—so I got this notion of teaching with another professor.

[00:30:30] I taught with several art professors—Greg Lynch, Matt Kahn. I taught with a business school professor, Jim Patell. I taught with a computer science professor, Terry Winograd, and with a psychology professor, Bob Sutton. I started out doing one, and then I just kept doing that because it was kind of magical if you could really teach in parallel with
them. I wanted to collaborate with them. Before [this co-teaching], I’d done things where I’d give a lecture in their class and they’d give a lecture in my class, but not both of you standing up in front of the class and kind of fighting, you know, showing the students that there were intellectual differences and different directions you could go.

[00:31:19] The students loved it when we’d fight in class. [Cough] I got very excited about that and decided that we should do this in a more systematic and more university-wide way. That was the proposal for the d.school, which was to bring multiple professors and students from all over the university together and work on really interesting projects. I knew from my business experience before that magic would happen by having really diverse student teams and really diverse faculty, and that you’d get to new-to-the-world places. As you soon as you have a psychology professor and a computer science professor, and a business professor, and an opera singer, or whatever [professional] you want to add, in the same room, then by definition, if you could get them to work together, they would do new-to-the-world stuff, and the students would benefit from that.

[00:32:12] Today the d.school has students from all seven schools at Stanford and professors from all [across the university] come and collaborate together on projects of consequence. Right? No required classes. Nobody’s kind of paid to be there. Nobody gets a degree. Like people are there because they want to be and they see this kind of flipping that people do.

**Humburg:** It’s like a fermentation process.
Kelley: [00:32:42] Yes. I mean it is. It could have died really quickly, but somehow it just hit a nerve with people and people want to be here.

Humburg: Do you remember at what point your own thinking about these different co-teaching situations, where you were feeling the buzz from it and the difference in the students’ reactions began to take shape into what became the d.school? I mean how did those conversations start?

Kelley: [00:33:09] I did a class with Terry Winograd, who’s a HCI [Human Computer Interaction] guy in the Computer Science Department. We did a project with Electronic Arts. I had a friend, Bing Gordon, who was one of the early guys in Electronic Arts, and he sponsored this class. Terry and I had our respective students. It was just like they were coming up with really great ideas. The sponsoring guy loved it, and Terry and I really hit it off, and it was just all good, like one of those [situations where] one plus one equals four or five. Right? Then I put together this class with Jim Patell and a guy named Bill Behrman on the developing world.

[00:33:52] Today it’s called Extreme Affordability. It wasn’t just that the students were doing fantastic things; it just felt good to teach like this. I really like affiliation with somebody else. I’m not much of a loner. I can’t sit down and do my email. I’ve got to have my assistant sit next to me, because there’s just something about that. It really felt good to me to teach with somebody else. Maybe it’s just an insecurity thing that I’m doing a good job on my own. Somehow, with somebody else there that I know is doing a good—I mean I can evaluate that they’re doing a good job, and if I’m keeping up with them, I must be doing a good job, too.
It was a good fit for me personally to team-teach in this way, in this kind of—we call it radical collaboration, and I saw it be fantastic for the students. I was really compelled to start talking to deans and other people—in this particular case, it was Dean Plummer, and my department chair who was a guy named Fritz Prinz. They were supportive, but it was hard to get anything going, right, other than just random classes. Then I was in my office with one of my clients. IDEO has clients, right, and I’m always going back and forth to IDEO. Then one of my clients is this guy, his name’s Hasso Plattner.

He was the chairman of SAP, a big software company. I was telling him about this magical stuff that had happened with this collaboration and human-centered design and stuff. So to make a long story short, he said, “I’ll help you with that.” I came back—

Humbug: Literally?

Kelley: [00:35:34] Yes, that’s what he said.

Humbug: In one conversation?

Kelley: [00:35:36] One conversation. One conversation with him.

Humbug: You must have been fired up.

Kelley: [00:35:39] To tell you the truth; I thought ‘that’s very nice.’ I went back and was talking to the Stanford people about it and they said “When a billionaire says they’ll help you, you call them back.” Right? I called him back. Hasso said, “Well, what do you need?” George Kembel, who was a guy that I had hired to help me, one of my former students and a really great guy, became the executive director of the d. school; we just put together a list of what we
wanted. You know, we need the $150 thousand a year for this, and we need a building and $15 million [for a building]. He said okay and sent a check. We should have put a much bigger number on it. We didn’t know.

**Hamburg:** That’s where you say afterwards, oh, my god, it was that easy.

**Kelley:** [00:36:24] But anyway, so the whole thing I’m talking roughly eight years of time from when I’m teaching to the point where I’ve hired George and we’re really seriously thinking about it, and then Hasso’s funding—it was a long time. But the moment that we got the money, it’s just been a rocket ship ever since that.

**Hamburg:** The eight years was this co-teaching that you’re describing—

**Kelley:** [00:36:55] I made up eight years. I’m not sure that’s it exactly. But I just said it’s a many years kind of thing.

[00:37:00] From the time I started co-teaching to the time the d. school started, there was a lot of time in there where we were talking about it and trying to convince people this was a good idea. The university doesn’t really like this breadth. I mean they talk a good story about it. Hennessey’s particularly big on it. They started Bio-X, and they started lots of these multi-disciplinary things. [The d.school is] just lucky its time had come where the university was willing to experiment with it despite that all of the rewards line up—like winning a Nobel Prize—by going very deep [into focused research], and we hope people will keep going very deep and winning Nobel Prizes. [00:37:43] This breadth is just another tool. But for some reason, at some point it became okay in the university to have these multi-disciplinary institutes.
Humburg: What were the first couple years like when you actually were formalized as the d. school?

Kelley: There was no building on campus, and so Jim Plummer walked us around and showed us everything that was available. The best thing was a double-wide trailer out on Panama Street on the edge of campus. It was really a double-wide trailer. It was terrible. We were kind of reluctant, but it was all that there was really. So we said, okay, we’ll take it. Everybody looks back on those days really fondly because everything was crummy and you could spill paint on the floor and you could nail something up wherever you wanted to nail it up.

Together we went in there on weekends and we’d saw and paint and it was a really lovely time. The faculty was small enough that we could make all decisions together. It was really hard learning to collaborate.

Humburg: It’s a different level of collaboration, isn’t it?

Kelley: Yes, a very different level. You’re trained mostly to stay home in your own laboratory and go deep. For a lot of the faculty, this design stuff was new to them, and so thinking like a designer was hard. Also, giving up control and having somebody there of the same status as you in class is completely different than having your own class to be a kind of sage on stage where it’s you and the students. I mean there’s no question about who has the status in that situation. These are lovely people. These guys were handpicked.

Humburg: Who were your faculty people?
Kelley: [00:39:30] The faculty were Bernie Roth, Jim Patell, Terry Winograd, Bob Sutton, Dave Beach, that were clearly there. Hope I got them all. Sutton, Beach, Winograd, Bernie. I think that’s it. So there’s six. Then I brought in a team of my favorite 35-year-olds. I’m a big believer in 35-year-olds. They’re adults and they’ve gone through a bunch of stuff, but they’re all about the future. So, I brought a bunch of them in from IDEO and other places that were complete design thinkers. Right? The whole thing in the d.school is about design thinking—or getting that mindset of design thinking.

[00:40:26] The faculty were game, but they hadn’t done much teaching of design thinking. They taught computer science. The young guys who were pros at design thinking and teaching it were the adjunct faculty. That was also hard to get the regular faculty to accept the adjunct faculty as the experts in the design thinking part of it. We had some rough times there. So now, in hindsight, it seems it’s all good. We had the regular faculty and we have the adjunct faculty, and everybody is teaching their classes, and [crosstalk].

Humbug: As you look back, is there anything you would have done differently?

Kelley: [00:41:06] Yes. There’s a lot of things that could have been done differently. The first thing I would have done differently is to spend more time realizing how to get the faculty to work together. I just kind of said, “Go. Here, let’s put it together.” I would have spent much more time with the regular faculty getting them used to these adjunct guys, and I would
have made it much clearer about whose role is what. I’m not the kind of person who likes to have a lot of [laughter] confrontation.

[00:41:42] I could have saved a lot of the confrontation if I’d have just made it really clear about people’s roles and what you could do and what you couldn’t do. The university’s pretty much [organized] around regular faculty—regular faculty carry all the status. Right? The people who come from other places, who help, don’t really have much of a career path.

Right? There is today. I really preferred it—

**Humburg:** There is more of a career path today for outside people?

**Kelley:** [00:42:17] In the d.school there is because it’s a big enough organization that there’s administrators and staff and all that kind of stuff. There wasn’t [in that early] time. Anyways, my life lesson here was that in order to avoid conflict and to keep the kind of participatory democracy like the way we operate here in Mechanical Engineering, I erred on the side of not making things clear enough and roles clear enough, and so people were kind of in limbo a lot of the time. I could fix that today if I’d start over again. It hasn’t hurt us completely, but—

**Humburg:** Are you talking a little bit about how two very strong people, expert in their own fields, start to collaborate in front of students—

**Kelley:** [00:43:08] Yes. Exactly.

**Humburg:** —as well as the—

**Kelley:** [00:43:11] All faculty. So there’s what we call the radical collaboration problem, which was really new. Then there was the regular faculty adopting a point of view that this design thinking stuff—that they didn’t know—and
that the adjunct faculty people who knew it—having the regular faculty understand what [the adjunct faculty’s] role was and what it could be, given that the university is not going to recognize them as faculty really. They’re going to recognize them as helping, but not as faculty. It’s like the adjunct faculty described the situation, after the fact, as we get to play golf, but we’re the caddy, not the player.

[00:43:55] **We** get to walk the course, but we’re the caddy. That’s a problem in the university, that status difference. If I’d have known that was going to rub people the wrong way on both sides, I could have fixed it. The only reason I’m talking about this is that many universities, it seems like one a week, come to us and say we’d like to have a d. school. Could we have a d. school? That’s actually the only problem. The only problem is this [process of] getting the faculty to collaborate without a lot of friction.

**Humburg:** What do you tell them to do other than say we went through some rough times?

**Kelley:** [00:44:29] I tell them to be mindful of this problem, and I talk about this practicing kind of professional faculty and the regular faculty, because I don’t think you can get a d.school started with just regular faculty, in my opinion, because they’re so used to staying home in their [own laboratory, or discipline] —the collaboration is not natural. Universities always talk about the silos. I mean if somebody wants to say something negative about a university, they talk about the silos. There’s some truth in it just like in all these things. The truth in it is that you’ve been rewarded your whole career for staying home, going deep in a narrow area, right, and that collaborating
with somebody really different from you—I'm in the School of Engineering.

[00:45:19] Collaborating with somebody in the Humanities or the Arts just never would have occurred. [But in the d.school,] you might think about collaborating with someone in the Business School so you could get something that’s viable in the world, like we’re talking about, [or] an international relations professor teaching with a computer science professor, teaching with an anthropologist.

Humburg: In a problem-solving orientation.

Kelley: [00:45:44] On a big important project like poverty in Africa. We actually have that course.

Humburg: Even today, do you have special structures in place or activities or orientations that help manage that?

Kelley: [00:46:00] I wish. What we have now are social norms. Basically, people see the classes that are succeeding and, by succeeding, I mean it’s when a lot of students want to come to them. We should do a better job of measuring what we think is good. Now, [at the d. school] it’s a social norm to act [collaboratively] around the other professors, which is to have a healthy dialogue in front of the students. Now we debrief classes; we stay afterwards. In the old days, when you just taught your own class, there was really nothing to do after class except leave thinking you did a good job because nobody’s going to argue with you. For the most part, the students aren't going to come up to you—well, with some exceptions. [00:46:40] Now, when you have multiple faculty, you have to have a debrief after each class to talk about how it went, and what did each of you think. The
students hang around and watch this. It’s sometimes contentious. Right? If you have a difficult discussion about what works and what didn’t work amongst your colleagues, that’s the way you improve by the next class, not by the next year. Prior to that time I taught my [collaborative] class, I’d go away thinking I’d done a good job, and I come back the next year to give the same lecture because there was no feedback loop in it. [00:47:12] There was no improvement. There was no way to improve unless I, through my own incentive, decided I needed to improve that lecture. Here, like with two other faculty in the room, and they’re telling me what you did wrong, or what you did right, well, you’re going to improve by the next time you talk. It’s really different.

**Humburg:** Actually, as you’re describing this debrief process, I’m thinking it really is a nod to design thinking because, without that feedback loop, you can’t move forward and improve.

**Kelley:** [00:47:41] Can’t go forward. We continuously get better, which is great, and the classes continuously get better.

**Humburg:** I listened to your TED Talk on creative confidence—I really enjoyed it. I shared it with many people on my list. I know that just as you moved from designing to design thinking, which was another level up, as is creative confidence another level up from—

**Kelley:** [00:48:19] That’s really insightful. That’s how it is.

**Humburg:** It’s like moving from 5,000 to 10,000 to 30,000 feet perspectives. Even at 30,000, you can still go higher, which I can’t believe, given your style of
thinking and being and walking on this earth, that you aren’t somewhere
above it already, or it hasn’t morphed into—

Kelley:  [00:48:41] My way of progressing is—like with design thinking and with
creative confidence—to start talking about it, and, if it resonates with
people, I keep talking about it. If it doesn’t, I shut up. Every person I talk
to adds a little bit to the thinking.

[00:48:59] Then pretty soon, I feel confident enough to say, “Hey, let’s call
this design thinking.” Or, “Hey, let’s look at people’s creative confidence.”
Let’s try to change that. So I’m pitching 27 stories all the time, and we’ll see
which one sticks. Creative confidence is different in that it’s more about the
individual. I think design and design thinking are team sports, as most
things are in life. Creative confidence does apply to teams in effect, but the
fuel for me behind creative confidence is watching individuals at the d.
school flip from thinking of themselves in a certain way—mostly in the
engineering school and mostly [seeing themselves] as analytical people. Then
we take them through a series of projects, and we give them little small
successes, and their confidence starts to build.

[00:50:01] Then, a little more success, and a little more success, like
somebody learning to play the piano. When they do particularly well, you
encourage them. That’s how people learn to play the piano. It’s not that it’s
that much fun, especially for people who aren’t put on earth to play the
piano. But if you have a series of small successes and you’re rewarded for it,
you’ll keep going. That’s what happens with us. Then, to watch them
flip—what I described before, as an educator—this is what you live for.
Usually, they come up to you crying and say, “Oh, my god, I never felt this way before, but I now feel like I’m a creative person. I’m walking around thinking of myself as a creative person now.”

**Humburg:** Are you just describing the flip for me right now?

**Kelley:** Yes. Kids have gone to really traditional schools where it was all about science and math, or for doctors, where it’s all about excelling in this stuff. All of a sudden, I’m talking about trusting your intuitive mind, and that, "Oh my god, my intuitive mind is made up of all the experiences I have had," and it’s actually pretty good at leaping to a breakthrough, if you give it the right fertilizer and water and sunlight. That’s all we’re doing is getting them to that place. It’s transformative to these people. I say this and it sounds like it’s like my religion or something I’m promoting.

[00:51:21] I’m writing this book on creative confidence with my brother [Tom Kelley]. We’ve interviewed 75 Stanford students, and each one of their stories is more fantastic than the other, where by having creative confidence [they say], "I decided to do what I really want to do. I’m going to not be this—my major. I’m going to go do what I want to do or, I’ve always been fearful that people would judge me if I did something wild and crazy, and now I don’t have that fear anymore." Yes, one of the biggest moments—it was in the TED Talk. One of the biggest moments for me in this whole creative confidence thing is when I met Albert Bandura. Albert Bandura is a really famous guy.

[00:52:03] I didn’t know him before on campus, but he has really changed the world. I went to talk to him about it. He has this thing called self-
efficacy, which is basically the same deal about getting people to understand their place in the world, and that they can achieve whatever they set out to do. That’s what we’re doing. It feels so good. Hundreds of students come through the [d.school]—roughly 7 or 800 came through last year alone. They come in and they get this new open mindset to the world. It’s amazing what they do. Not just in the classes at the school, but they develop more stick-to-it-iveness. They work on projects longer in their real life, and they end up doing what they want to do.

Humburg: Is this what you’re learning from your interviews?
Kelley: [00:53:02] Yes.

Humburg: Kind of like the rollout effect of the flip.
Kelley: [00:53:07] Yes. Bandura did stuff like cure people [fear of] of snakes and spiders. Right? That also affected them in their lives. They became less fearful of snakes, but they also became more open and less fearful—more empowered in other things in their lives, as well. That’s what he found. He’s doing real experiments. [Laughter] We’re kind of like fooling around.

Humburg: I don’t know. You’re kind of doing ethnographic experiments. Right?
Kelley: [00:53:34] Right. It’s not scientifically significant numbers.

Humburg: Where do you think the d.school is headed? How do you see the future, I guess?
Kelley: [00:53:49] The d. school’s issue is—presently, we’ll resolve this soon because we’ll have to play our cards—but do we do global outreach and try to make as many d. school-like entities in the world? Right? Or do we stay home at Stanford and just make this an incredible gem and expect that the
students will leave and go out into the world? There are just lots of opportunities with all these universities calling on all these people to go out and help them. Is that the right thing for us to do? Or is it to do better and better teaching here and refine what design thinking is here? Whatever we are—these kind of ambitious, academic types—we will probably do both, instead of focusing.

[00:54:48] What do we mean by that? We want to do university-wide projects. I want to look at the big one project coming up which is the university is becoming all crazy about online learning. What’s online learning going to be? Five years from now, when the faculties Google about this and there’s controversy, I’m really excited. My take on it is, while everybody’s working on online learning, the d. school ought to look at what’s the on-campus experience going to be like once online learning’s a big deal.

[00:55:19] We’re going to interview every major player in the university about online learning and paint a picture of online learning. We’re going to use [the interview results] to paint a picture for us to do our design thinking, what’s the on-campus experience going to be like, right, because that seems really like an exciting project. What’s that experience like given that you’re mostly going to be watching lectures at home or in the dorm room?—the lecture part of the class.

[00:55:49] Then, what do those teachers do that’s really of high value when they are in the classroom, or when they interact with the students, or what’s res ed [residential education] like? Maybe it’s all happening in the dorms.
We don’t know because we haven’t done the project yet. There’s plenty to
do at Stanford by using design thinking, not just to teach design thinking,
but using—

**Humburg:** You’re saying to use the process of design thinking and apply it to issues
within Stanford University as a community, as an academic community, as a
student community.

**Kelley:** [00:56:19] How do you improve the experience in the hospital, or how do
you improve the experience of eating in a club. There’s plenty of stuff to
do. I know we’re going in that direction for sure. Then how much
outreach [to] the rest of the world we'll do is another thing. Another thing
is—we’re not analytical. We do everything intuitively. Many of the
[projects] that would really make a difference by getting foundations, or big
money, or big focus behind them require us to measure success.

[00:56:57] I’m talking to you like it’s my religion. I’m enthusiastic. I don’t
have any proof; I just know it in my body after watching all these students
flipping or transforming [their thinking]. We’ve got plenty of Ph.D.’s and
people like that around here who could study this, and so I know in our
future there will be some kind of way to measure the success of what we’re
doing. Then that’s the kind of thing that plays with foundations and
governments so we can get more substantial backing for what we’re doing
instead of it just being—what do you call it? We want to make what we’re
doing more empirical rather than just anecdotal.

**Humburg:** It sort of validates that concept of design thinking from a measurement or
evaluation perspective.
Kelley: [00:57:42] Right, because if I go to a foundation and say, hey, give me $20 million, we want to do this project, they say show me some of your research. Show me your proof.—

Humburg: Show me the results you’ve obtained.

Kelley: [00:57:53] Yes, rather than “you’re cute and it’s a good story, but I’m not giving you any money.”

Humburg: Which is true. Right. [Laughter]

Kelley: [00:58:00] [Laughter]

Humburg: As you look back over all your Stanford experiences, what are the highlights for you? Who are the most memorable people? Let’s just take the student part of it first.

Kelley: [00:58:21] Matt Kahn, art professor with whom I collaborated, always said “The eggs teach the chickens,” that’s what the students are— so when I heard you say “over all the years,” you really start to think of your students. You think of specific students and you think in general about the students, as well. For me, there’s that. Then there are these kinds of perfect moments where somebody you collaborate with does or says something really important for you. So the first person was Bob McKim. I told that story where [that moment with him] just comes to mind.

[00:58:55] Then I had another perfect moment where I’m a pretty obscure guy doing probably a pretty good job of teaching, but I’m a consulting faculty member. Then I’m befriended by this dean named Jim Gibbons. Jim Gibbons somehow gets me to be a regular faculty member—I get tenure. Right?
Humburg: What was that all about? Dean Plummer mentioned in an email that there was a little bit of controversy—

Kelley: [00:59:35] I don’t have a Ph.D., I’ve never written a paper. Plummer, who’s my present favorite person among the higher-ups, gave me—what do you call it? Gibbons befriended me and got me both tenure and membership in the National Academy of Engineering, which is a big deal. But Plummer gave me an endowed chair. Prior to Plummer, everybody kind of didn’t [laughter] want to tell the story. Why did we give this guy [laughter] tenure when he doesn’t have a Ph.D. or has never written an academic paper? Plummer is a really straightforward guy and he wanted to address it. Jim Plummer, what a great guy.

[01:00:25] The reason he’s a good dean is he’s really straightforward. He just says what he thinks, and that’s the way it’s going to be, and not embarrassed that it’s going to be this way because “I’m the dean right now and this is my value system and so this is what we’re going to do.” I’m not sure I’d be that clear. But he’s that clear. He took my weird appointment head-on. When I got an endowed chair, I got the Donald W. Whittier Professor in Mechanical Engineering.

Humburg: When was that?

Kelley: [01:00:57] Boy, I don’t know. Anyways, so now we’re at this [appointment event]. We’ve been at these things a bunch of times—Plummer is at the podium, and he’s saying—and the faculty’s all up there,—and he’s saying, “I’ll bet some of you are wondering why we’re giving an endowed chair to a guy who doesn’t have a Ph.D. and has never written a paper.”
Humburg: He actually said that?

Kelley: [01:01:22] He said that. Of course, there’s a lot of guys out in the audience going, “Yeah, yeah, yeah, yeah” [nodding]. He later said to me, in private, “I’m sure glad you haven’t written any papers [laughter]. If you’d written one, there’d be a lot of weight on how good that paper was. But since you’ve written none, we’re in good shape.” [In his really eloquent speech before the audience] he said, “I’ll bet you’re wondering why...well, the actual thing of the university in giving someone an endowed chair has to do with their impact on the world. Are they making impact on the world?” He said, “We’ve grown to define impact as learned, scholarly papers in the right journals. That’s how we’ve determined impact.”

Humburg: Within the university.

Kelley: [01:02:17] Within the university. We’ve determined that that’s what impact is. He said, “There are other ways to have impact, and that’s why we’re doing this now.” But it was just so great that he took [the topic] head-on—because I’m the kind of weird professor who’s got status, but it’s not in the same way as others—it’s like in a family with a secret and you’re not talking about it. [Laughter] We’re keeping this kid in the closet. [Laughter] We’re not talking about him.

Humburg: Partly because there was so much to talk about relative to Stanford, we haven’t covered anything about your outside professional career. We wanted to understand your experiences as a faculty member and your collaborations, as well as memories of students and your teaching moments. Obviously, as an extremely successful professional business person, you’ve
impacted the world in so many different ways through your IDEO projects and your clients.

**Kelley:** [01:03:05] Yes. That’s the way Gibbons got me tenure. He said, “look, there’s these guys who are going out for tenure that have all these papers, and you just have all these projects, and we’re going to use the projects. We’re going to pretend that the projects are, in effect, papers.”

**Humburg:** They’re just a different form.

**Kelley:** [01:03:24] We actually looked at [the projects] and papers that way. When you talk about somebody’s paper, there’s their name and then the names of other people who helped them, their graduate students. It wasn’t like they did it by themselves exactly and so my projects are the same way. I had different roles in those projects, and we kind of just formatted [laughter] the projects in the same way as if they were journal papers. Right?

**Humburg:** I would like to ask about some specific people because you did raise a few new names. I know I actually interviewed Matt Kahn for his oral history.

**Kelley:** [01:03:59] Did you?

**Humburg:** He brought you up.

**Kelley:** [01:04:00] Did he?

**Humburg:** Yes. He’s very proud and I think just remembers fondly those moments of teaching.

**Kelley:** [01:04:07] Yes. I taught with him for 30 years maybe, but he taught for 60. Nobody will ever beat his record, in my opinion, as far as tenure. I mean length of time at Stanford. So, you know, he didn’t get a degree. Right?
I’m sure he told you that. I think he started at Stanford at 19 or 20 [years of age].

Humburg: Yeah, I know. He described the whole experience of coming from Cranbrook, I think it was.

Kelley: [01:04:32] But I mean if you start at 19 and teach until you’re 80, I mean nobody can start at 19 today. I mean you’ve got to be 30 to start today, don’t you? Or maybe 28?

Humburg: Plus the fact he was doing something totally different than anybody else at the university because of why he came in the first place.

Kelley: [01:04:47] He impacted me—we became friends and colleagues. We taught the same course together for many, many years. He impacted me more than anything when I was a student. The idea of doing everything with intent. Matt Kahn does everything in his life with intent. He wouldn’t pick these shoelaces [reaching for his shoes] without a lot of thinking about it. Did you go to his house?

Humburg: Yes.

Kelley: [01:05:13] You go to his house, everything is done to the hilt. I mean there’s nothing.

[01:05:20] Everything is in its place. I wouldn’t want to be the one who dusts. He notices when they turn something the wrong way. He taught me to do everything with intent. I wrap Christmas presents or carve a pumpkin today about a 1,000 times better than I did before. I mean I would have carved a pumpkin and maybe it would have been a little more design-y than
the average person. But now when I carve a pumpkin, it’s to the hilt. Every little thing like that Matt taught me, I mean taught all of his students.

**Humburg:** What about teaching with him? What was that like?

**Kelley:** [01:05:55] It’s like I describe the d.school. I mean he’s strong-minded, and I’m strong-minded. We’re mostly fighting in front of the students. The students would say, “Well, you just said the opposite from what Matt said.” And, I’d say, “It’s something you’re going to have to figure out what you think given that he says something and I say something different.” I was very close to Matt. When Matt’s wife was alive, we would go on trips together and stuff. I’m good friends with his son, Ira. Every time you do something, you say, “How would Matt do it?” You have that in your mind, like how would Matt do it, especially something artistic. How would Matt do that?

[01:06:37] I’m making an anniversary card for my wife. What would Matt do? He would do something extreme.

**Humburg:** Is that part of the intention?

**Kelley:** [01:06:43] Yes. He would do something extreme. He’d care about it. I’ll tell you the Matt story that is most memorable for me. I was a student. One of the projects he assigned was to do a self-portrait in wire. You’d take a piece of wire and bend it so you have this thing that’s supposed to look like you. It’s just a continuous piece of wire. It makes a three-dimensional object because it’s going back and forth.

**Humburg:** Your hands are moving to show a three-dimensional head.
Kelley: [01:07:11] Right. You know, the size of a softball. I did it three or four times. I was really proud of mine. I didn't know I was going to be able to do [the wire self-portrait]. I was really proud of it. It's time to go to class so I went over to the shop. Remember, I'm the wood shop TA. I went and cut off a piece of two-by-four and drilled a hole and then stuck the very bottom wire of the sculpture that went straight down into the piece of wood and I took it to class.

[01:07:39] I think he knew it was good, but he spent the entire critique talking to me about how I must not care about my work because I just stuck it in an old crummy two-by-four. He talked about the two-by-four the whole time. Never said anything about the sculpture. Right? Matt would find some piece of marble and he'd spend just as much time making the base perfect as he did the sculpture. But, I was a student. I had that to learn from him. Then the best thing that could ever happen to you as a student was that Matt asked you if he could have your piece of work for his house.

[01:08:23] I'm not sure whether that's legal or what you do. I have two pieces today I'm still proud of. I have two pieces I made as a student that are sitting in his house on display and today, 35 years later, I'm still proud of that.

Humburg: What are they?

Kelley: [01:08:34] One's a bowl. I turned a bowl for him. I was really good at wood working because I was in wood shop. I turned this bowl and it was just an acrobatic act. I mean in turning a bowl, the thing is how thin can
you get the walls and such. I turned this bowl and it was—and you could see through the wood. Matt said that’s a great job of turning it, but the design stinks. This is my precious thing that I worked on for so long. He said turn another bowl where you care about the design. That second bowl’s in his house.

**Kelley:** [01:09:10] I have another thing which hides a prism. It’s a container that holds a prism, and when the light hits it [it glows]. At Stanford—there are pretty special people. I just talked about meeting Albert Bandura who put me on this whole creative confidence thing around his theories and research. The TED Talk was basically describing creative confidence.

**Humburg:** How might your life have been different without the Stanford community?

**Kelley:** [01:09:44] I was going to be an engineer and not a very good one. Right? Stanford just really changed my life in that way. If your peers are spectacular, you gain so much from them. If you’re ambitious at all, you want to compete. You want to be as good as they are at whatever your thing is. I’m not that competitive a person, but once you see [examples around you]—it’s a little like Silicon Valley—another influence on me is Silicon Valley. Of course, we’re all here. It’s like, well, it’s easy to start a company. Right?

[01:10:24] Everybody you know is starting a company. They’re making brownies or they’re doing a semiconductor company or whatever.

Stanford’s a little like that. Well, everybody is spectacular at what they do. Everybody’s winning Nobel Prizes, aren’t they? Or everybody’s published in the best journal. It’s like you aspire to be as good as the guy in the next
office. And by the way, it doesn’t seem that hard because the guy in the next office doesn’t seem that special. If he can have his novel published, I can. Right? It’s as if by association, you see something that’s really important.

[01:11:08] You see somebody else do something, and you think “I’m going to try that. I’m going to try to be like that.” That’s what’s cool about being a professor. Stanford is just full of really great people. Henry Fuchs was a professor who had the office next to me when I was first a professor. He died soon after that. We were talking about advising students, because I was asking him something specific about what course I should advise a student to take. They were asking about different courses outside of their emphasis area—about some electives and how’s that done. His response has always stuck with me.

[01:11:49] He said he thought that the best possible major at Stanford would be to find out who the 20 best professors in the university are and then take one class from each of them. [Laughter] Like that would be, by far, the best major. There’s [Robert] Sapolsky who works with [primates]—take that class. Take the sleep class and the course from the physics guy who’s spectacular. He said that would be the best. I think he’s right.

**Humburg:** Sort of the diversity of it all.

**Kelley:** [01:12:21] And also there’s something about a class from a really good teacher that is 10 times better than one from an average teacher. It’s not just twice as good, as far as your learning.
Humburg: You have a prominent role in this whole other professional and client world outside of Stanford which is IDEO.

Kelley: [01:12:41] I’m the chairman. Yes. But it’s a different way to learn. There are 40 people from IDEO that teach at Stanford—mentor, teach a class. There’s just something different. Like I care about design thinking. Right? IDEO cares about design thinking. What we learn at Stanford about design thinking and what we learn at IDEO about design thinking are completely different. There’s money changing hands at IDEO. It’s a different kind of thing. They bring that back to Stanford. Everything I took to IDEO I learned at Stanford.

[01:13:16] Now, everything we learn at IDEO comes back to Stanford. I mean what I learned at Stanford I took to IDEO. Now everything that IDEO learns as far as improving design thinking comes back to Stanford.

Humburg: Give me an example of that, because you talked about the two worlds being different. The design thinking is obviously different because of the two different milieus, you know, in which it’s being done. Tell me a little bit about that.

Kelley: [01:13:40] There are many things. Let’s say presenting to clients. [Cough] Somebody’s just paid you $2 million to go look at education in Peru. The expectation level of what they’re going to get for their money—right?—the case with which [the proposed solution] is applicable, has got to be completely different than—as a Stanford professor, with my kids the story I tell them is “It’s got to be in the ballpark.” But I don’t have to know the return on investment of anything. In order to [describe the return on
investment] when presenting, IDEO will show testimonials from real people who [will apply our work]—so we’re working on helping teachers in Peru.

[01:14:42] IDEO will make a statement, and then to back that up in the presentation they’ll jump to a video of an actual teacher saying how she applied that. It’s like proof, in other words. Right? We would never do that [in a Stanford class]. But the students see [the IDEO presentations], so now in all of my projects, the really good ones, they’ve gotten feedback. They’ve taken their project—they didn’t just design their project, they designed their project then they’ve taken it out and shown it to the user group and gotten a little video that says, “Hey, this is good.” [The students’] motivation is a little different—but who am I to not think that’s an A project?

[01:15:24] If the person they designed for is raving about it, it must be a really good project regardless of what—the importance of the kind of testimonial, the feedback from people that happened at IDEO because of the commercial money changing hands comes back to Stanford [as a practice] because it’s just a good indication of the quality of the design. Right? One reason, it’s for money. The other, it’s basically for "fit"—showing that the design works.

**Humbug:** You’re back to "fit," where we started from, aren’t you?

**Kelley:** [01:16:02] Yes, exactly. Everything’s about fit for me. That’s what you do when you get people in your office hours—you’re trying to help them decide what were they put on earth to do because that’s their big question.
It’s so confusing because their parents are pushing them a certain way and the societal thing is [that] it’s good to be a doctor and a lawyer. Some of them should be educators and designers.

Humburg: This is actually what you were saying earlier. Didn’t you say that was one of the more rewarding aspects of creative confidence—people were more likely to follow their deep inclination rather than the typical career path of—

Kelley: [01:16:40] What’s meaningful to them.

Humburg: Really good closing. Thank you for taking so much time.


Humburg: Have I given you enough opportunity to talk about the next steps following from your work with creative confidence? Are you starting to think about where it goes next?

Kelley: [01:17:13] After creative confidence?

Humburg: Yes. Or just defining it even larger.

Kelley: [01:17:19] No. The next step is proof in measurement. Right? It’s not that this stops because as I said a couple of times, creative confidence is kind of applied. I think the next step has to do with trusting your intuitive mind. It’s going to be more medical. The next level up is going to be about brain science. The next findings are going to be that stuff’s going on in the brain that we don’t understand is happening there now and [those findings] are going to support [trusting your intuitive mind]—

Humburg: Oh, yes. I see what you’re saying.

Kelley: [01:18:04] [Cough] It’s going to support the creative stuff. When do you come up with an idea, there is a secretion in the brain—when you have an a-
ha! moment—it feels good because there’s biochemistry involved. I have a friend who’s a Tibetan monk who’s at Stanford in the Compassion Project [part of the Center for Compassion and Altruism Research and Education (CCARE)]. That’s something you ought to look into if you want to do a really interesting thing. His name’s Thupten Jinpa. He’s taking his monk buddies and putting them in scanners. They get them in a state of compassion, and then they put them in a scanner and they see what’s going on in these guy’s minds.

**Humburg:** What’s the fellow’s name?

**Kelley:** [01:18:41] Jinpa [Thupten Jinpa, visiting Tibetan scholar and translator for the Dalai Lama]. I can’t tell you how to spell his last name. If you type in “Compassion Project at Stanford,” there’s a guy named Dr. James R. Doty [MD, Director of CCARE] or something who’s the head of it at Stanford. But Jinpa’s the Tibetan monk who comes. When he’s at Stanford, he stays at our house for a week every month.

**Humburg:** Actually, when the Dalai Lama was here, he talked about that. I think he’s a huge supporter of CCARE, if not the primary funding source.

**Kelley:** [01:19:07] Every time you see a picture of the Dalai Lama, Jinpa’s sitting next to him. He’s the translator for the Dalai Lama.

**Humburg:** I just was very heartened to hear [the Dalai Lama’s] wanting to substantiate the human biological affects of compassion from a scientific perspective and finally bring everything full circle.

**Kelley:** [01:19:24] It’ll certainly get in the book. One of my interesting moments when I started writing this creative confidence book, I was talking to Jinpa
about the concept of "creative," like if people feel creative and stuff. He said, “Well, there’s no word in the Tibetan language for creative—that translates to creative. The closest thing we have is the word for "natural."

More creative is more natural. Absolutely. It’s back to the humanness.

**Humburg:** Thank you.

**Kelley:** [01:20:03] Sure. I hope we got what you want.

**Humburg:** Yes. Is there anything I didn’t ask you that you’d like to—

**Kelley:** [01:20:16] No. I can’t think of anything right now. We got McKim in, and we got Kahn in, and we got the deans in, and—

**Humburg:** In one of the articles I read for this interview, you talked about how you took Bandura’s concept of guided mastery along with what you’d already experienced in design thinking and realized—

**Kelley:** [01:20:37] That’s what we’re doing. It was so nice that he’s like a real guy and he’s done it for real, and it just supports our anecdotal kind of findings, which is great when that happens. Right? He’s something. I had a really strange—not strange. It’s the wrong word. I had a really interesting interview. I interviewed him for about three hours. He’s 86.

[01:21:05] Yes. But when you’re with him, you swear—I mean I’m 61. He doesn’t seem a day older than me. He’s so fit and so lively. My father’s 88 and he’s not like that at all. I mean my father’s great, health wise. But Bandura’s like—there’s all these people who drink juice and eat the right food and stuff to stay young. Do whatever he’s doing. I mean whatever he’s doing, he’s actually young.

**Humburg:** I’m sure some of that has to do with how he thinks about the world.

[End of Interview with David Kelley – October 22, 2012]
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