



**Oral History of Computer Literacy Bookshops, Inc.:
Daniel A. Doernberg and Rachel Unkefer**

Interviewed by:
Dag Spicer

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Spicer: So, thank you very much for doing this. It's Friday, March 26th, 2021 and we're here with Dan Doernberg and Rachel Unkefer. Is that how you pronounce your name?

Unkefer: Unkefer, yeah.

Spicer: Unkefer, great. There was a famous computer scientist called Keith Uncapher. I don't know if you ever heard of him. It was spelt differently, U-N-C-A-P-H-E-R.

Unkefer: Yeah. That's the branch of the family who wanted to have a fancy spelling. It's the same name.

Spicer: Oh, okay.

Unkefer: Same family, yeah.

Spicer: Interesting. Yeah, he was quite well known. Well, thanks again and we're going to be talking today about the wonderful series of stores that you created, the Computer Literacy Bookshops, about its origins and development; and I thank you very much, Dan, for that timeline that you sent. That was very useful to help me structure the interview and of course, all of those wonderful reprints and articles from various magazines and so on were super useful. I wanted to start out, just before we get into the kind of timeline-driven part of it, with a couple high-level comments that I thought we could start with to get the brain cells going, and one of those is Rachel, in *InfoWorld* in 1984, you said "The store was reflecting, I think, not so much the book industry as the computer industry," and I wonder if you could maybe expand a little bit on that.

Unkefer: Time travels back. I think what I was probably talking about there was that the general bookstores that sold popular books were just in a very different business than our business, because our information was technical and needed for people's professional work, and we responded on a different timeline. So, for leisure reading, if a bookstore was out of stock on the John Grisham novel you wanted-- I'm not sure he was writing books back then-- they would say "Oh, we'll get it for you in three weeks," and that was fine. But if we told an engineer "This book that you want on the SCSI Interface, we'll get it for you in three weeks," they would say "Are you out of your mind? I need it tomorrow." So, we were responding to a very different sense of urgency and the prices on our books were very different. We didn't have \$4.95 paperbacks. Everything was much more expensive. There were just so many differences between what we were doing and a general bookstore that a lot of accepted ways of doing business at a general bookstore just did not apply to what we were doing. We had to re-invent our industry, sort of.

Spicer: Right. You had very sophisticated customers, of course, at a much higher level than the general public, for example, which, of course, puts burdens on the staff. How did you handle getting the knowledge to interact with these people coming in and asking you for X, Y, Z and hopefully having that in stock in some way?

Unkefer: Training and thick, thick binders, binders of information and training and we mostly hired students who were taking computer science classes at community colleges. I think it was mostly community colleges. We didn't get...

Doernberg: Some San Jose students.

Unkefer: Maybe San Jose State, right. So, we would try to get community college or San Jose State students or people who were studying or kind of somewhat up to date on things and then we had extensive training and ongoing training and thick reference binders and people whose job it was to update those references all the time.

Spicer: Now, when you say training, who did the training?

Unkefer: Do you want talk about that, Dan?

Doernberg: Initially, the division of labor between Rachel and me was I was the buyer and the customer service person and she was the back office, making things happen...

Unkefer: Operations.

Doernberg: Systems operations, programming. The reason Rachel shifted to me is because I started out doing the customer service training and, yeah, it was formal. I would explain and at the beginning, we didn't necessarily have computer science students. At the very beginning, we were just a retail bookstore and we got whoever we got and they knew some computer stuff. So, then it was much more training. But anyway, there was technical training and then there was also customer service training and we had our ways of doing things and within a year or two, we had a very formalized process, where when the new people-- I was trying to remember-- Rachel, were they called info specs, is that the...

Unkefer: Information specialists, yes.

Doernberg: Exactly. Yeah, we called them info specs.

Spicer: Right.

Doernberg: The first week that someone was hired, they just shadowed me or shadowed someone experienced and they weren't allowed to talk to customers until they actually passed a test, "Do you recognize what's SCSI? Do you recognize what ATM is? Do you..." stuff like that, BIOS, and whatever. We actually cared a lot that when customers came in, they were going to talk to someone who was knowledgeable, not as knowledgeable as them, not anywhere near as knowledgeable as them, but someone who would understand the basics of what they were looking for, at least get them to the right section of the store and that was a major thing, one of the things that made us unique.

Unkefer: We had training manuals eventually for every job in the whole store. Actually, I ran across the other day a video that we had filmed about how to unpack a box¹. So, we had manuals and quizzes and

¹ [Doernberg's note] Important actually! We found that many new hires opened the boxes by cutting down the middle where the box flaps came together, first with their box cutters (known internally as "slashers"!), often resulting in the top book having its cover slashed and becoming unsellable. Proper technique was to open the sides first and then pull up before cutting down the middle. :->

you had to pass certain training modules before you were allowed to do the next type of task and so on. So, we were very serious. Most retail stores, the first thing they do is throw you on a cash register, because it's a very quick thing to learn, but that's where customers ask questions, a lot of times. We never thought that was a great idea. So, we just sat down and mapped out this succession of modules and quizzes and...

Spicer: That's amazing.

Doernberg: Let me expand on that just for a second because that's actually a really critical window into probably the biggest challenge of Computer Literacy Bookshops, that basic question "How do you get people who can talk to the engineers and know enough to be of help?" and it was just a never-ending challenge. We would have people, they knew enough that they could be good with us, but once they had graduated or maybe once they were just a few classes shy, many of them, could get jobs that just paid much more than we could and started them on a technical career. So, they were finishing up their studies at San Jose State, but they had a programming job with Apple. So, we were constantly getting people who were kind of in the middle of their studies and we'd have them for three months, for six months, for oh, my god, two years, someone, "Oh, that's amazing," and we did, by the end, have many people who had been with us for a while, for a year, two years, three years. Anyway, some of the reasons there's all that training is (a), because Rachel is a systems genius and she just thinks that way, and could do it, but the other thing is (b) we had such turnover that that was the only way to achieve the effect that we needed.

Unkefer: Also, in Silicon Valley, during that beginning, at least much of that time, the unemployment rate was I want to say like 2%, which is actually negative unemployment. People were driving from Stockton and Sacramento and places to work in the Valley. So unemployment was just so ridiculous that we were competing with Apple and HP and everybody else for employees. So, we had to train people-- we had to get people with potential that we could train up for what we needed them to do and then they usually used that as a springboard to go do something more lucrative.

Spicer: Right. The nice thing about-- sorry, go ahead, Dan.

Doernberg: I was just going to mention for a retail bookstore, we did pay more than most retail stores and I think we treated our employees really well overall, but we still were not going to out-pay what Apple or someone would for a technical job.

Unkefer: Right. We were paying people like \$8, \$9 an hour in the early 80s, mid-80s, which I don't know what that is now, but I'm guessing it's \$20-something or.²..

Doernberg: Still more than minimum wage.

Unkefer: Oh, it was...

Spicer: Oh, yes. Yeah.

² [Doernberg's note] USinflationcalculator.com says that \$8.50 in 1984 would be \$22.02 today (2021).

Unkefer: Minimum wage back then was like \$4-something.

Spicer: Oh, okay.

Unkefer: We were paying-- like, our lowest, our entry level jobs were above California minimum wage, which was already higher than the federal.

Doernberg: And people had access to health insurance and we actually had a pension plan.

Spicer: Wow. Amazing.

Doernberg: So, for retail, people were treated pretty well.

Spicer: Yeah. That's unheard of to have a pension plan. Now, this brings up a point that many commentators about your stores have commented on, which is the excellent quality of the advice that people get, specifically how people who worked there were able to say "Ah, this book isn't quite right for you. This other one is better, is a better fit, better impedance match," if you want. What are the qualities of a computer book and conversely, what are the qualities of an awful computer book?

Unkefer: That's probably more up your alley than mine, but yeah.

Doernberg: I would reframe the question Among the things that I think made Computer Literacy special is just the advantage that any specialist has. If you're a dermatologist and you see 30 people a day for ten years that just have skin conditions, after a while, you have a fair amount of specialized knowledge. Our staff was talking to 100 or 200 people a shift or 300 people or more and it wasn't necessarily-- I mean, certainly, I have ideas about what's a good book and what's a bad book and it would be the same kinds of things with "Does the writer have a good writing style? Can they communicate well? Is the book up to date?" All that normal stuff.

But more important than "What's a bad book?", and protecting people from them, was that different people just had such different needs. There was the person who had a job interview the next day and they were like "I just need something quick so I can fake that I know this thing," and then we're going to give them something that's relatively thin-- this is kind of a baby example-- and then other people are like "I just got hired for this job and I need in a week to know as much as possible," and for them it was "Okay, here's the definitive 500-page book." It's not like one [Ed--book] was good and one was bad.

What our staff had experience with was understanding what the person was looking for and then saying "At least check out these two and check out those two. Here's two good ones for this. Here's two good ones for that," and then pretty much after that, we might be out of our depth and we can't tell the person between the two good ones, which one is better for you because if we knew that, we'd be system engineers, but it was that kind of knowledge and we always liked-- we, royal we, me for sure, most of the staff that we hired-- we just enjoyed talking to our customers. "Hey, I see you got this new book that just came in last week. What appealed to you about it?" and then we'd start to accumulate that kind of information, like "A lot of the programmers are saying this book uses Motorola 68000 examples." So, if a

customer says “I need a systems book for something.” We say “Are you Intel or Apple?” and they say “Apple.” “Okay. Here’s a book that uses 68000 examples,” stuff like that.

Spicer: Right. So, it’s kind of a process of mutual alignment. As time goes by, you get to know the customers and they know what you stock or the kind of things you tend to stock. What was the maximum...

Doernberg: Well, we...

Unkefer: We stocked everything.

Doernberg: We stocked everything, yeah. That’s the other thing that’s...

Unkefer: There was nothing we didn’t have on the shelf-- not intentionally.

Doernberg: Nothing technical. There would be a thousand books that were “Intro to Computers,” and we carried 10 or 20 of the most popular of those. But if it was “Intro to C Programming,” we literally would have 100 choices on the shelf. So, it was interesting to talk to someone: “You chose this one, it’s not one of our real popular ones. What led you to choose it?” and maybe they’d say “Oh, it’s not one of the popular ones? I just liked the cover,” and then we’d say “OK, we can make some other suggestions for you.”

Spicer: Yeah.

Doernberg: But more often, they’d say “Yeah, I looked at a bunch of them, but this is the only one that had X,” and then we’d would share that among the staff, “Hey, guys, this customer said...” I remember something with computer graphics, I’d never heard of the term ‘splines’ and the guy said “I’m doing this certain graphics thing and I’m trying to find something on splines, and this book has a chapter on it.” So I spread the word among the staff [that splines was of interest] and then I started looking for math books [on splines]. We had a mathematics section that wasn’t super extensive. It may be like two bookcases or something like that, but math is not a small subject area.

Unkefer: It was only two bookcases.

Spicer: Sorry, how much does a bookcase hold? How many books does a bookcase hold?

Unkefer: About 100.

Doernberg: Monty Python would ask if [it was a] “European bookcase or...”

Spicer: African?

Doernberg: Or African, yeah.

Spicer: Right. Just so our users will...

Unkefer: About like 100. Yeah. I mean, like probably 100 titles or something like that.

Spicer: Okay.

Unkefer: It depends on which...

Doernberg: Like four linear feet and like five-- like 20 linear feet of books.

Unkefer: Twenty linear feet, yeah.

Doernberg: Something like that.

Spicer: Great. I know you had, I think, 5,000 titles at the peak? No?

Unkefer: More than that.

Spicer: More than that?

Unkefer: Oh, much. Yeah.

Spicer: Can you say how many more?

Unkefer: I would say tens of thousands, for sure, but I-- it's been a while since I've thought about those kinds of numbers.

Spicer: Yeah. Wow.

Doernberg: We haven't gone through-- we've just started the process of going through the attic...

Unkefer: Old papers.

Doernberg: The company didn't go out of business. It was acquired. So, we turned over pretty much all the files and all the stuff to the new owners, but just certain things, either things that slipped through the cracks or for whatever reason, we still have some stuff and we don't have the complete corporate archives, but we have personal stuff and just meaningful...

Unkefer: It was tens of thousands of titles, for sure, because when we would do a physical inventory, we would shut down for pretty close to 24 hours and we would have maybe 20 people going around with bar code scanners and...

Spicer: Oh, my goodness.

Unkefer: Yeah, it would be in excess of 100,000 books³. I don't know how many titles, how many copies average we had per book.

³ [Doernberg's note] In our September 1987 interview with *Computer Languages* magazine we said 14,000 titles in our database and 60,000 books in stock. Some thousands of the titles were special orders we didn't carry, but by far

Spicer: Speaking of barcodes, you had that amazing book on barcode symbology as someone pointed out-- that is kind of what you'd call, I guess, 'near-print' material. It's something that companies put out as kind of a half-informational, half-promotional kind of thing.

Doernberg: Yep.

Unkefer: Yeah. We also had like chip catalogues. So, it was like Motorola...

Spicer: Like data books or...

Doernberg: Data books, yeah.

Unkefer: The data books engineers could get them free from their sales rep, but if you couldn't find yours and you were in a hurry ... these people were on expense accounts. They could go buy whatever they needed right now. So, we bought those from Motorola and Intel and wherever and mostly... did we have Intel? Yeah, I think we did.

Doernberg: Oh, yeah. We had National, TI, Intel, I don't remember if we had AMD, but...

Unkefer: We just went and made deals with their publications departments and they would sell us a case of those and then we would mark them up and sell them for eight bucks or ten bucks or something. They weren't that expensive and again, theoretically the engineers could get those for free, but they might not be able to put their hands on it right now at lunchtime when they needed it.

Spicer: Exactly.

Unkefer: So, they would just run and buy it.

Spicer: Also, people that are in technology-adjacent sectors, like hobbyists, for example, no sales guy is going to talk to them.

Doernberg: Good point.

Spicer: So, it's a nice audience for you too, probably.

Doernberg: Oh, go ahead, Rach. Go ahead.

Unkefer: No, I was just going to talk about the research department thing.

Doernberg: This will be a segue to you then for that. I was just going to say I was the buyer for most of the time, much of the time, and it was extremely common for me to call someone, like the barcode symbology company, and say "Hey, I heard you've got this thing. We're this specialty bookstore in Silicon Valley and we'd like to order some," and they'd say "No, this is not a book for bookstores. You don't

the majority of titles were stocked. So by 1997, 10 years later, I'm guessing we stocked over 10,000 titles and surely over 100,000 books in stock.

understand. This is technical and it's just 30 pages. It's really more like a pamphlet. No bookstore wants a pamphlet." I said "I think we can sell a lot of those and get your name out. Give it a try. Why not?" So, it was like "Okay, sure, we'll send you five of them and if you sell them, great, and then we'll talk when you reorder," and we'd sell them within a week and I'd call back and say "Can we order 20 or 30?" and then we'd work out a deal... and O'Reilly and Associates, we were the first store that carried their stuff.

Spicer: Oh, amazing.

Unkefer: We did. Yeah. Well, and...

Doernberg: Rachel, your O'Reilly stories...

Unkefer: O'Reilly advertised in computer magazines at that time and then people would walk in —for those little nutshell [books] ... I don't know if you've ever seen those. They were little brown paper staple-bound... awful⁴, like not good for retail..., but customers would come in with ads from computer magazines, like O'Reilly or there were these books on telecommunications from Sweden-- was that ISDN? Was that his book?

Doernberg: There was one, yeah.

Unkefer: One of his books was on ISDN...

Doernberg: Bo Lindgren.

Unkefer: Bo Lindgren, which there was nothing on [ISDN]...

Doernberg: He had three books.

Unkefer: So, people would come in with an ad or they got some flyer in the mail or whatever and they'd say "Do you carry this book?" and we would look at it and say "We don't have it right now, but we can get it for you," and we would -- make a copy-- we probably didn't have a copier, but...

Doernberg: Sure, we did. Yeah.

Unkefer: We would take the ad and then at the beginning, it was Dan, but then later, we actually had a research department whose job it was-...our staff was encouraged any time somebody came in with some ad or whatever of something we didn't have, it's like "Write it down and send it to the Research Department. Even if that person doesn't buy it, this is how we're going to find out about stuff no one else stocks," and so, like that Bo Lindgren [series], that was back in the days of CompuServe and I actually sent him a telex through CompuServe to Sweden...

⁴ [Doernberg's note] Great books, awful only in terms of retail display – the early covers were quite boring (no animals or graphics of any kind) and they were so thin that they had no spine showing the books' titles, so they were easy for customers to miss when browsing unless we put them face-out, which we didn't always want to do (face out takes up more valuable shelf space than spine out) .

Spicer: Oh, my.

Unkefer: To ask him “Can we buy your books wholesale so we can sell them here?” and then we became a regular dealer with him. Every few months, we’d get a carton of books from Sweden.

Doernberg: They were in English.

Unkefer: Yeah. They were in English. That was one of our big competitive advantages, we sought out weird things that nobody else had and that the customers found out by other channels and they fed us this information and no other store was going to bother with any of that stuff.

Doernberg: Just a couple follow-ons to that. One is that we were-- I don't know how to express it. We always tried to be long-term and customer experience, brand-oriented in our approach. So, we would get stuff in the store that maybe an MBA consultant would say “By the time you create an account and then generate the invoice and then a purchase order and then pay the invoice and you’re doing all this stuff for this one little company that has one book, your overhead costs...”

Unkefer: It’s not cost-effective. Yeah.

Doernberg: Yeah. “Your overhead cost is not worth it.” But for us, we’ve got hundreds of those publishers that no other bookstore in the world is bothering with.

Unkefer: So, we can say we have everything because we have...

Doernberg: Yeah. We have everything and we took that very seriously ... everything that was technical, everything that was unique...we didn’t carry the books “Using Your Computer for Livestock Control,” or “101 Sewing Projects with Your [Computer-] Controlled Sewing Machine,” those kind of vertical markets, not necessarily. But if it was for techies, then yes, we tried to just have everything. And the other thing Rachel mentioned about customers coming in with photocopies of ads, but from the beginning, we ourselves, as soon as the techie magazines, *Dr. Dobb’s*, *Byte*, Unix System Journals, all those... as soon as it came in, I would look at the magazines and see if anyone was advertising anything that we’ve never heard of before. and then we would order it in quickly and try and race ahead of the customers so if they come in “Hey, I saw this thing in...” “Oh, yeah, we’ve got that.”

Unkefer: But we didn’t get all the IEEE journals. So, that we didn’t have.

Doernberg: No. Exactly.

Unkefer: That’s where a lot of that stuff came from was IEEE journals and there’s no way we could have gotten all of those.

Spicer: Yeah. Thank you so much for bringing us up to these sorts of high-level questions. I want to dig in a little bit into the timeline now and see the connection, I think, between the past and the present is just how you acquired this knowledge-- that’s one question I have, to be-- I mean, you’re both sort of the animating spirit behind this bookstore, but so much of what you bring is incredible subject matter

knowledge. So, I'm interested in that and I'd like to connect it to going back to 1977, when you were both at Duke taking computer science courses and I think that's where we'll start our story. Why don't you tell us a little bit about how that was for each of you and maybe what role it played in your later exploits at CLB?

Unkefer: So, how about if I start, Dan, and then that will segue you into your Army Research Institute [ARI] internship?

Doernberg: Sure.

Unkefer: So, at that time, my mother had actually gone back to college. She didn't go to college when she was a teenager. So, at the point when I was in college, my mother was also in college and she was doing what you would call now information technology... it was an MBA in information science or something like that. It was essentially like a programming...

Doernberg: Management Information Systems.

Unkefer: MIS, that's right. But she also was doing programming and stuff like that and so, at one time, she had said to me "You should try taking a programming class because I think you would like it. I think it would suit the way you think," and so on. So, I signed up for the intro to computers class at Duke and that class was essentially learning a version of Fortran and all of the assignments had to do with calculating the trajectories of rockets and stuff like that, that I was not super interested in. I think she was correct that the logic of how programming works and all that, did make sense to me, but I could not have cared less about the parabola of the rocket, whatever. Also, it was at that time, there was the Triangle Universities Computing Center [TUCC"]. We were connected with North Carolina State University and UNC and you had to type your program on punched cards one line at a time, and then submit your cards, and then come back the next day to find out that you had a missing semicolon somewhere in the deck and then you would have to fix it, submit it, come back the next day.

It could take like an entire week to debug a simple program, which just made it really hard trying to do an assignment for a class, and there was a lot of competition for the machines and stuff and so, just overall, it was not a fun experience because the hardware was just so primitive and the subject matter, the assignments we got were just not interesting. So, while I kind of felt "Yeah, I have an aptitude for this, but the way-- but this experience, I'm not going to sign up for the next semester of it. I'm done with it." That was my math/science requirement for the whole four years I was there, and that was enough.

Spicer: Right.

Doernberg: I had, in many ways, a similar experience. Rachel and I did not know each other at the time. We independently each took Intro to Computer Science one semester, each decided we had no interest in this whatsoever, and dropped it. I was a high school chess nerd and I thought I was interested in computers because I just really didn't understand how a machine could be smart and play chess.

Spicer: Right.

Doernberg: So, I thought I'd take this course on computers and find out. So, my memory of the computer science class was the first half of it was a language called Theta, which was like a pseudo assembly language, a training assembly language, "Move six into register five. Move two into register four. Add registers four and five." So, the first part was intro to assembly language-- tedious, tedious, tedious... and then the second half was PL/I, which was the successor language to Fortran.

Unkefer: It was actually PL/C, I think, the Cornell version, but yeah.

Doernberg: Okay. Yeah. There was-- and later, we had one book on PLM or PL running-- McCracken, PL/M for the Intel microprocessors. Anyway,... Rachel and I were both liberal arts people. Rachel was interested in literature and cross-cultural stuff and I was psychology and religion. So, neither of us took a lot of math/science and the Duke Intro to Computer Science...

Anyway, so, I took my one class in computer science and didn't learn anything about chess and dropped it and then I had a federal internship my junior year, where I was working for a branch of the Army. I did a literature review of simulation games. One way to train real estate agents might be to have them play Monopoly; it's fun and they find out that if you invest money in upgrading your houses, you can charge more rent. The Army wondered "What kind of games could we play to make someone a better tank gunner?" and stuff like that. The Army had people for two years and then most of them did not re-enlist; in that way they were like Computer Literacy, though perhaps a little bigger.⁵

Spicer: That's funny. Yeah.

Doernberg: So, the Army, you don't think about stuff like that.

Spicer: Yeah, for sure.

Doernberg: The Army said "Look, every year, we train 50,000 tank gunners and if we can figure out a way to shave one day off the training, that's like \$1 million."

Spicer: Right.

Doernberg: So ... they'll try anything, multimedia... there wasn't multimedia then, but whatever. Actually, they had an early system called PLATO.

Spicer: Oh, yes.

Doernberg: Out of I think Evanston...

Spicer: Illinois.

Doernberg: Northwestern-- yes, exactly.

⁵ [Doernberg's note] Not sure my joke came out well as originally worded; idea was that Army also shared with us the challenge of lots of staff turnover.

Spicer: [Actually, PLATO was developed at the University of Illinois – Ed.]

Unkefer: That was '78. So, this was the summer of...

Spicer: Thank you for the time..

Unkefer: Oh, sorry, summer of '79 when you were in Arlington⁶.

Doernberg: Right. Actually, the nice thing, I could go down to PLATO and I could play chess on my lunch hour.

Spicer: Oh, nice.

Doernberg: Against a computer, "Hey, this is cool."

Spicer: Yeah.

Doernberg: But anyway, I did that for the summer, nothing to do with computers, and as the internship wound down, I wrote out my end-of-the-internship paper, "Here's what I've learned," a 30-page paper and I did it on longhand on legal pads.

I gave it to the departmental secretary and she typed it up for a day or so and she gave it back to me and my heart just sank. I was like "Oh, my god." I don't remember her name, Mary, whatever. Of course, it was a woman because it was the 70s and I said "I'm so sorry. This paper doesn't make any sense because I left out a paragraph on Page 2 that I need. Here's the paragraph written out. I'm so sorry, you're going to have to retype this thing," and she said "No, I won't." I thought she was refusing, like "You're an intern, you're not going to make me retype this damn thing." So I said "What do you mean?" She says "No, I don't have to retype it. We have Mag Card Typewriters."

Spicer: IBM MC/ST.

Doernberg: Yeah⁷.

Spicer: Right.

Doernberg: I'm like "You have what?" She says "Watch."

Spicer: So lucky.

Doernberg: It had a little window with maybe three lines and she just scrolls up to it (on disk, I guess) and she says "Here, I'll just type it in for you." Being a liberal arts student who typed my own papers (I didn't have a departmental secretary to do it for me!), I spent many all-nighters typing up papers and

⁶ [Doernberg's note] Actually ARI was in Rosslyn, I was living in Georgetown with a high school friend who attended Georgetown.

⁷ [Doernberg's note] I actually never knew what the model/machine name was; for all I knew at the time this was the only such machine in the world!

handwriting in things in that I'd forgotten and realizing "Oh god, that didn't make any sense, but oh, well, too late, I've got to get this thing done." So she showed me a word processor, and that was a life-changing... like suddenly, computers were useful. This was more interesting than parabolas and falling bodies --this is something that I can use (if I ever worked for the Army again).

So, I went back to my student days and it actually never even occurred to me whether Duke had word processors anywhere. I just continued writing my term papers, typing them up, same old same old, and I graduated. I was a psych major. I thought I was going to be involved in mental health administration. This is the short version of the story. So, I got a job as the secretary to a female supervisor... the woman who ran the halfway house was a woman. I was her male secretary, and within a couple weeks, one of my first big projects was [to type] a fundraising letter that was going out for the launch of this halfway house and I had to write the same letter...

Unkefer: Type the same letter.

Doernberg: Yeah, I had to type out the same letter on a manual typewriter 120 times to 120 different potential donors that she had on her Rolodex. So, I told my boss, I said "Ellie, there are these things called 'word processors.' This is going to take me a whole week to do, but if I had a word processor, I could knock this thing out in like an hour and a half," and she said "Gee, that sounds like a really great machine, but we don't have one. So go ahead and start typing."

Spicer: Right.

Doernberg: I left that job about two or three weeks later having successfully sent off my 120 letters and I got a computer job.

Spicer: Oh, okay.

Doernberg: Anyway, that was my intro to computing and that's how I got hooked. Rachel got hooked because I kind of dragged her in to help me.

Spicer: Can you explain that? Obviously, you two met at some point, maybe in '79 or '80?

Unkefer: Fall of '78.

Doernberg: Fall of '78.

Spicer: Can you tell us a bit about that and Rachel, what was your trajectory, your introduction to computers, besides the parabola? What was your next step?

Unkefer: So, my mom had a bachelor's degree and then an MBA and I think... I'm not sure what year that was. She actually had an Ohio Scientific computer.

Spicer: Oh, yeah.

Unkefer: I guess it was CP/M. Was it a CP/M machine? I guess it was. Yeah. I don't remember.

Spicer: Good question.

Unkefer: But she had a computer. My family was kind of like that, we always had the weird gadgets that nobody else had heard of. There was a Motorola video game machine where you would play Pong, but there would be this thing you would tape to your television screen that would have like a line down the middle.

Spicer: Was that Magnavox?

Doernberg: Odyssey?

Unkefer: Odyssey.

Spicer: Yeah, Magnavox Odyssey,

Unkefer: That was in the 70s. So, we always had these techie things.

Doernberg: You were early adopters.

Unkefer: Yeah, very much so. I really don't know why.... So, I guess it was after we moved to Sunnyvale I bought a Commodore 64 when they came out and I played... so, somehow, I learned BASIC. How did I learn BASIC? I don't know. I knew BASIC before that.

Spicer: It's built in to the computer.

Unkefer: Yeah. I'm just trying to figure out when did I teach myself BASIC. I'm not sure. At some point, I taught myself BASIC or maybe it was from messing around with the Ohio Scientific machine, but yeah, I played around with early, early, early personal computers and I just liked playing around with them and so, I was interested in it just as a game, as a puzzle, that level and then I took a COBOL class.

Doernberg: I forgot about that.

Unkefer: Was that in Santa Barbara or was that in Silicon-- that was in Santa Barbara, I think.

Doernberg: I think Santa Barbara. I think your mom [said] "You can get jobs if you know how to program"

Unkefer: Yeah. So, I took a college class-- I kind of tinkered around the edges of that kind of stuff for a little while, but never anything very serious. It was just a fun little hobby and mainly, I got into it because my mom had introduced me to this whole area. And then when we started the store, I learned dBase II because we needed some way to track inventory and so on⁸. So, the Osborne computer came with dBase II.

⁸ [Doernberg's note] I had started creating some dBase files for a couple functions like printing out price stickers, but I didn't know what I was doing. Rachel quickly took over all back-end functions and we very quickly had a functional and increasingly sophisticated inventory control system.

Spicer: Oh, yeah, and WordStar.

Unkefer: And WordStar. It was a package. Yeah.

Spicer: And a five-inch screen, which must have been really fun to use with dBase II.

Unkefer: Yeah. But it had two floppy drives. So, you could swap them in and out and so, I taught myself dBase II in order to track inventory, then I started doing that just any time something came up, I would think about "We could probably do this in dBase II. There was no Excel... was SuperCalc the thing we had?"

Doernberg: SuperCalc was CP/M, I think.

Spicer: Yeah.

Unkefer: Yeah. It was just a necessity. It was just like "Well, this would probably work using this tool. So, I will teach myself how to do this thing." I mean, that's the story of our whole store. When you talk about "Where did you get the knowledge?" It's like everything was 100% self-taught all the time. That was it. We didn't have degrees in computer science or business degrees. And my parents had owned a business for decades. I grew up around people that owned businesses. My grandparents had businesses, in my family that was the normal thing to do. So, that was not scary or alien to me, and I was just like "Well, whatever we need to do, we'll just figure it out," and then that's what we did.

Spicer: That's great. So, you have that entrepreneurial genetic DNA. That's great. Your passion for books the bibliophilia, that's got to be part of who you are, people don't start bookstores unless they love books, just as books. Can you tell us a bit about the steps that made you decide to open a bookstore and how your passion for books and lifelong learning might have motivated you?

Doernberg: That would probably be me. Both of us... Rachel probably even more so is a book lover. She's got some draft novels in the drawer, as they say. Rachel is a writer and an extraordinary book person. But I was always the kid who would say, when my mom would go shopping, "Drop me off at the bookstore and I'll just browse."

Spicer: Yeah.

Doernberg: That's as a ten-year-old, thirteen-- Rach and I both did the "plowed through our local library" thing". I always loved bookstores. I always liked acquiring and kind of collecting... nothing valuable, but like Ian Fleming's James Bond books, I'd read one of them [and then] "Okay, I want to have the whole set." A used bookstore sold them for \$0.10 apiece, three for a quarter.

Spicer: Yes.

Doernberg: I'd go down there and I'm like "Okay, I'm going to complete this set," and I'd have them all. Those ones I read, but there were other books I'd just know "Oh, that's an important book in western culture. I'd like to have a copy of that." Most of those I'd never read, whereas Rachel, if she bought a

book, she would make sure to read it. Anyway, I quit the job at the halfway house and I got a computer job working on a DEC minicomputer⁹... it ran an online database of real estate data owned by McGraw Hill, and my department...

Unkefer: Multiple listing service.

Doernberg: Yeah, multiple listing service.

Spicer: Right.

Doernberg: They contracted to the local MLSs, multiple listing service, the boards of realty and there's big books they used to produce [which] people would flip through, looking for "Here's the houses in this neighborhood," and you see pictures and "This one has five bedrooms and two baths and it's on an acre of land. It's got a swimming pool," all that stuff. Online storage was expensive-- this is 1980 now. We've graduated. So the job that they trained me to do was to analyze the data in those books; if the print edition maybe had 5,000 characters, my job was to convey the same information about that house in 300 or 500 characters, I can't remember how many characters we had. So, you had fields like swimming pool. In the book, someone might say "We have an Olympic-sized swimming pool, heated," and I would say, "Okay, if I make that a multiple choice field, that's just one byte. So, that's just one of my 300 characters and so, on the online system, it would be swimming pool, yes/no. Forget Olympic, forget heated, for online, just find out yes or no do they have a pool, and if anyone cares about that then they'll check it out with their real estate agent or in the book." So, anyway, I was doing that stuff and this was kind of the classic maybe 70s kind of a thing, where you had your [computer-related] day job and then everyone else went home and I would stick around [at night] kind of poking around in the computer just to see how it worked and what are all the different operating system switches. There's ten different ways to log out. You can just go bye, but if you go bye/F, that gives you blah, blah, blah, all the switches on all the commands. So, I was staying late, just trying to learn that stuff. McGraw Hill had some project and they were paying a consultant... it may have been \$500 an hour back in 1980.

Spicer: Wow.

Doernberg: There was some big project and this guy¹⁰ could work as many hours as he could, whatever was needed to do to finish this project, he was authorized to do it. So I'd be there late and he'd be there late and we're periodically meeting at the dot matrix printer for all the white and green bar paper. It's spewing forth the code and we got to talking, [and I'd ask him stuff like] "When you hit a key on the keyboard, how does it go to the computer?" while he's getting paid by the company! I didn't take huge

⁹ [Doernberg's note] I took a Basic programming course in a Santa Barbara Adult Ed class on Commodore PET machines (I was always intrigued by its wacky full-screen editor) while I was working at McGraw-Hill (our software was written in Basic-PLUS). I got to use that knowledge within a few months. I submitted, as part of an employee suggestion program, a simple program to automate production of some of the user manual pages. I got \$1000 for that, 10% of the first year's savings... the only money I ever made writing code!

¹⁰ [Doernberg's note] The programmer's name was Tim Ryan, and his rate (back then) was around \$50/hour. He specialized in BASIC-PLUS programming for the DEC PDP-11 RSTS/E. McGraw-Hill had signed a contract that included a hefty monthly penalty for late delivery, and they'd promised a module for which not a line of code yet existed, so Tim was authorized to do whatever was needed to get it done.

advantage of this, but he was always happy to explain how stuff worked to me. I was reading stuff and he loaned me his copy of my first computer book, "Computer Lib" by Ted Nelson.

Spicer: Oh, wow. That's a [classic].

Doernberg: Yeah, raised fist, "You can and must learn computers NOW."

Spicer: Yes.

Doernberg: It was a life-changing thing, another step in that direction and this book explained "Here's the history of computers, and here's what you can do with them, and here are some of the people that are doing important stuff."¹¹ It was kind of like an underground comic book in its style.

Spicer: Oh, yeah, and you turn it over, it's a different book too, right?

Doernberg: You flip it around and then it's "Dream Machines."

Spicer: Right.

Doernberg: Yeah.

Spicer: Did you carry that, by the way, in your store?

Doernberg: Oh, yeah.

Unkefer: Yeah. Well, it got reissued, though.

Spicer: Ah, yeah.

Unkefer: The cool big white thing got re-issued by Microsoft Press and it was this little yellow boring thing.

Spicer: Oh, okay.

Unkefer: We have an autographed copy of it.

Doernberg: I've got both. No, we did carry the original. There was a place called...

Unkefer: But not for very long.

Doernberg: Until Microsoft's came out, there was a little distributor, it was called The Distributor and they were in Illinois or Indiana or something like that¹². Ted used to live there and he had made a deal at some

¹¹ [Doernberg's note] One of the people was Ralph Griswold of Bell Labs, the inventor of the SNOBOL programming language. Our publishing company Peer-to-Peer later published two of his books on his later programming language Icon. A nice example of things coming full circle.

¹² [Doernberg's note] South Bend, Indiana

point with them, he gave them his printed books and we ordered five copies a year. But yeah, we always kept "The Home Computer Revolution," and his other self-published books in stock. Microsoft re-issued one of them. Ted was a customer of ours, the Xanadu people were customers too.

Spicer: Oh, yeah.

Doernberg: Yeah. Roger Gregory would come in and a bunch of the other programmers would come in and they'd get their books and we'd talk and I'd ask "Hey, how's Xanadu coming?" "Oh, yeah, just another couple months, I think. We're really close."

Spicer: That's great.

Doernberg: I don't know if I sent you in the *Computer Currents* interview... I did an interview where I talked about Ted Nelson, what a big influence he was. Anyway, pretty soon I got the idea that what I want to do is open up a little bookstore that just sells computer books. I probably won't make much money, but whatever I sell, I'll make some money and I'll just sit around and read computer books all day and I'll do that for a year or two and then I'll know enough to get a job as a programmer or as a something. But it just sounds really fun." I was hooked. I was reading all the magazines and stuff and so...

Spicer: So, you saw it as almost a personal development project in some ways.

Doernberg: No one in my family was an entrepreneur. This was not a business venture, exactly. This was "I like bookstores. I'll have a bookstore. I won't lose too much money. Maybe I'll make a little bit of money, but I will have a really good time and I'll learn a lot of stuff."

Spicer: And Rachel brought the financial discipline and the management discipline. Is that fair to say?

Unkefer: Systems.

Spicer: The systems, yeah.

Doernberg: But not-- it's an interesting story-- not intentionally... I'll telescope this. So, I had this idea for the bookstore and we were living at the time in Santa Barbara. Rachel moved there. I followed along a little bit later and this was our first time each in California. So, we decided to go up to San Francisco, cool city, and I told her Silicon Valley is this place where all the computer companies are, and it's right outside of San Francisco...so can we stop there? Rachel's memory is a little bit different. She had a friend, a high school friend who lived there, who actually is a world class...

Unkefer: In Silicon Valley.

Doernberg: In Silicon Valley, yeah. Rachel went to high school with Dale Luck, who was the guy behind the graphics of the Commodore Amiga.

Spicer: Oh, yeah.

Unkefer: Yeah, graphics designer for the Amiga.

Spicer: Yeah. That name is really familiar.

Doernberg: Yeah. He's been doing Hackers conferences and he's... in the world of computer graphics, he was like a major, major figure, but he wasn't yet, he was working for Hewlett-Packard.

Unkefer: That's when he was working at HP like everyone else right after college.

Spicer: Like Wozniak.

Unkefer: Everybody.

Spicer: Yeah.

Doernberg: So, we stayed with Dale ... Rachel and I remember differently, not important, but I said "While we're going to San Francisco, I just want to check out Silicon Valley, they must have a specialty bookstore like what I'm thinking of doing in Santa Barbara, and I'll see what that looks like, and I'll buy some books and bring them back home with me." And it turned out that Silicon Valley did not have a specialty bookstore and then it was like "Rachel, we've got to move here. I want to open a store. Let's do it."

Unkefer: Well, it was mainly "Why would you open that store in Santa Barbara if there isn't one in Silicon Valley?" That's where you should do it if there's not one there.

Spicer: Right.

Unkefer: So, yeah. We moved to Silicon Valley.

Spicer: Did you have... this is probably over-dramatizing it, but did you do a competitive analysis, let's say, of the landscape up here? Rachel's going "Huh?"

Unkefer: I mean...

Spicer: Just to see what your competitors might be...

Unkefer: Oh, sure. I mean, we visited Stacey's and Stanford, I'm sure, and B. Dalton and whatever. Yeah. I'm sure we...

Doernberg: Books, Inc.

Unkefer: I'm sure we looked around, but it was like clear that if anybody was going to do it, that would be the place. So, this was like... it must have been the end of '82 or mid-'82.

Doernberg: No, '81.

Unkefer: Okay. Yeah.

Doernberg: I'll tell you the timeline... I worked for McGraw Hill for like a year and learned a pretty fair amount, and was reading all the magazines, and then I wanted to work with personal computers because I was only working with minicomputers. I tried to get a job at an Apple dealership and I didn't know enough...lots of people wanted to work at an Apple dealership. But I was able to get a job at a RadioShack computer store¹³ because that, apparently, was not quite as cool as Apple. Who knew? But I worked there for like four or five months and I was the dedicated tech support person.

Spicer: Great. Is that just for computers or for all electronics?

Doernberg: Just for computers.

Spicer: Oh, okay, just computers.

Doernberg: Oh, god. No. Just computers. I mean, it's like it's good and it's bad. It's good because it helps sales a lot. The sales girl would say "You see Dan over there in that corner? He's our tech support guy. If you ever have any problems, call Dan."

Spicer: Oh, no.

Doernberg: The problem was, Dan didn't really know anything about personal computers. So, I learned the word processor¹⁴ right away, but RadioShack sold like 40 different name brand, licensed—VisiCalc, construction cost estimating—packages and I didn't know anything about any of them except [the Word Processor and MBASIC]...

Unkefer: You had like all these farmers and agricultural businesses.

Doernberg: All kinds... Santa Barbara had some wealthy retired people, there were some business people, there were farmers. The store did pretty well and the guy¹⁵ was a really good salesman and I learned a ton about how salespeople think. The way I did my customer service and sales was completely different than how RadioShack did it, or a normal salesperson would do it, but I learned a lot from listening to them talk about "Oh, with that customer, what you should have said was blah, blah, blah," it was really good. But the other thing about that [job] was I got to mess with personal computers, and one of the customers used to bring in his old computer magazines when he was done with them, including *InfoWorld*... and *InfoWorld* was just Heaven.

Spicer: Very good. Yeah.

Doernberg: Every week, I just wanted to read *InfoWorld* and others: *Personal Computing* and *Kilobaud* and *Creative Computing*..... *Interface Age*. There was a bunch of magazines that I would sometimes be able to get my hands on, but *InfoWorld* was like "This is what's going on in computing-- here's the new

¹³ [Doernberg's note] The official name was Radio Shack Computer Center (my store was in Goleta just outside Santa Barbara).

¹⁴ [Doernberg's note] Scripsit. Seemed like a pretty reliable, decent program, but I never got to use it for anything serious and never used it again.

¹⁵ [Doernberg's note] The name of the Store Manager was Terry Graham.

stuff and here's the hot software." Anyway, I was reading *InfoWorld*. We moved to Silicon Valley. I got two part-time jobs in regular bookstores, just so I could see from an employee perspective how do bookstores work and I learned a little bit about that kind of stuff. I also made a pilgrimage to InfoWorld [right away], and I would go up there every two weeks: "Hey, do you guys need any help with anything?" I was setting up magazine display racks for free for them, ...I can't remember the term, dumps, I think they called them.

Spicer: Yeah.

Doernberg: Cardboard, you assemble them like origami, you put together the pieces and they had something that would hold magazines. I just did little dumb scut work that they needed someone to do. "Sure, Dan, you shred these envelopes," or whatever. And then they let me do a book review and I had a byline book review in *InfoWorld*.

Spicer: Oh, wow.

Doernberg: And in the meantime, because I knew I wanted to start my bookstore, I had joined the American Booksellers Association. So, I was reading trade stuff now about how you open a bookstore... here's how to do projections, and calculate turn rates and shrinkage percentages. I was studying and reading that kind of stuff. I did a three-page business plan and whether it would stand up to scrutiny, I have my doubts.

Unkefer: We took an accounting class at Santa Barbara City College before we moved.

Doernberg: Yeah.

Unkefer: We both took Intro to Accounting.

Spicer: What impresses me is the preparation that you both put into this before you...

Doernberg: No, only me. Only me.

Spicer: Really?

Unkefer: I was so sick of hearing about it. Oh, my gosh.

Spicer: Oh, okay.

Doernberg: Rachel... that's why I said I dragged Rachel into this. Rachel was not on board for this.

Unkefer: No. I thought it was a very stupid idea because why would anyone want to go to a bookstore that only has books about computers? That, number one, stupid. Number two, he was just talking incessantly for months and months and months, [about] nothing but that, and I was so tired of it. And he had started ordering books and we had closets full of cartons of books.

Doernberg: I was hoping you'd forgotten about that.

Unkefer: No. I never will. It was this obsessive kind of thing and I was just so tired of it. I was like “Just do this already because I am so sick of hearing about it. Just do it and get it out of your system.” I had a temp job doing tech support at National Semiconductor for cash registers, grocery store cash registers, answering calls, mostly about scales, about grocery scales. Then I got a job designing printed circuit boards, which I didn’t know anything about at all. But again, the unemployment rate was very low, so, people trained you to do things. I was just trying to figure out “What do I want to do while he’s doing this thing?” and so, I was, at that point, doing printed circuit boards.

So, I took a week vacation from the printed circuit board job to help him get the boxes unpacked t... actually, my sister was there too. She was in town. She was helping. We were trying to get stuff on the shelves and do all this stuff and then I started asking him questions like “How are you going to handle this? How are you going to handle that?” and then he didn’t know what I was talking about and then we had to make a deposit. Then we had to like deposit some checks or something and he was not... like, he had never done a commercial deposit slip and I had had other jobs, where I had to do cash register stuff and close up and balance, balancing cash registers, things like that. He didn’t really know about that because that wasn’t in the jobs that he had done.

So, I was there for like a week and I was like “Holy cow. This doesn’t seem like he prepared for this, the mechanical parts of it,” and so, I was there for a week, then I had to go back to my job. But then there was a bunch of turmoil at that job and then as soon as I got back, I got fired from that job. So, I came back to the store and I said “Well, you’re in luck because I just got fired. So, now, I have a lot of free time.” So, I started setting up accounting stuff and I started setting up the cash register and those kind of things... trying to create infrastructure while the store had already been open for like a week.

Spicer: Wow.

Doernberg: There’s an important thing to clarify there. My father was an accountant, an IRS agent with an accounting degree, and that’s what he did his whole life. The plan was that he was going to come out to California when I signed the lease and he was going to set up the books and accounting systems for me, But the night before I was supposed to sign the lease for the Sunnyvale store, my dad died.

Unkefer: He had a heart attack and...

Doernberg: He had a heart attack. We got a phone call. It was like-- Rachel and I are both from Ohio. I’m from Cincinnati. Rachel is from a small town, agricultural Ohio, up in the north. So, it was like “Dan, get on a plane as fast as you can and hopefully, he’ll make it through the night.” So, Rachel drove me to San Francisco and I...

Unkefer: He didn’t make it.

Doernberg: Yeah.

Unkefer: Didn’t get there in time.

Spicer: So sorry.

Doernberg: So, anyway, there was no systems because my dad was going to do it. I was in Ohio for two weeks and then I came back and signed the lease and I went ahead with the store, but ... I was not in great shape emotionally because it was a big thing.

Spicer: Sure.

Doernberg: I hadn't exactly dealt with "Obviously, Dad's not going to do that. So, that means I need to make an alternate plan." But I didn't really make an alternate plan.

Unkefer: Yeah. Also, there's a very big difference between us in terms of attention to detail and where our skillsets are, and that sort of figuring out how a store operates, beyond just ordering some books, the granular detail of it, was just not his forté... When you're in college with someone, you don't really understand what they're like in the real world, because you just don't see them outside of college.

Doernberg: You're living in a bubble. Your meals are provided.

Spicer: Sure.

Unkefer: To me, at that point, when I'm like "You don't know how to fill out a deposit slip?" That to me was like "Oh, I had no idea that you were going into this venture with understanding about the books and that part of it, but not the mechanics of day to day running a thing..." also, you'd never supervised anybody before, had you? I don't think so.

Doernberg: No. Never.

Unkefer: I had supervisory jobs since I was 16 and I'm the oldest of five kids. So, I was always in charge of everything and I had managerial experience. So, at the point where I come back after I'm done with this [printed circuit design] job, I'm like looking around and saying "I really don't know how you're going to manage this by yourself, because there's a lot of stuff here that needs to happen that you're not aware of, much less have done before. So, I will help you get this off the ground because it's looking iffy to me right now.

Doernberg: Can I share two short and I think fairly amusing examples?

Spicer: Absolutely. Yeah.

Doernberg: So, my idea of running, of being the buyer at the bookstore was every day, you see what books have sold and then you reorder them.

Unkefer: Replace whatever is sold, yeah.

Doernberg: Yeah, replace what sold, if you wanted to, and then you have new stuff coming in. So, the inventory will grow over time. So, anyway, after we sold a bunch of Prentice Hall books, I would then re-order from Prentice Hall.

Unkefer: You would just get on the phone and verbally...

Doernberg: I know, but wait, let me... so, I would make the purchase orders, I would place orders for more material, and Rach and I, we're in one small little office facing each other. So, I'm looking right at Rachel, she's at me. I'm driving her crazy because my voice is loud. But anyway, over the course of maybe a week or two, Rachel asked me "How do you record these purchase orders that you're making?" and I said "What do you mean?"

Spicer: Record?

Doernberg: Record? So, I said "Well, I just ordered them and then the books will come, why do I need to keep track of that?" She said "What if the order gets lost in the mail? What if there's a problem? You need to know what you ordered!" I was like "Really? Oh, okay." So, that was one of those things, and then a few weeks in, we were close to the first month, Rachel said "How does California work with the sales tax?"

Unkefer: Like, when are we supposed to send in the sales tax?

Doernberg: Wait, yeah, the sequence is funny. So, she said "How does sales tax work with California?" and I said "What do you mean?" and she said "What do you mean 'What do I mean?'" and I said "No, what do you mean?" So, she says "Well, when we're charging the customers sales tax with every transaction, we don't get to keep that! We have to send that to the state." I said "I never thought about that." We looked it up and the sales tax report was due the next day and I'd been keeping no records. So, luckily, I didn't know this, but one of the reasons people use a cash register is because it has automatic totals for every day. So that night we stayed up all night unrolling these cash register tapes to find out how much we sold each day, putting the numbers in some kind of a journal and then tallying them up and then that morning, we sent the sales tax to the state. So, anyway, these are some of the reasons why Rachel had some concerns about whether I was quite yet properly trained to run a business.

Spicer: Interesting.

Doernberg: And it's possible her fears were justified. We'll never know. But I can actually say Rachel is the best systems person I have ever met. I mean, I'm sure there's very good ones in the computer industry too, but Rachel is just spectacular.

Spicer: Yeah. It sounds like it and also, just the detail that I picked up on were the training binders. I mean, a lot of companies never get to that. Even if they've been in business for decades, they still don't have that kind of stuff. That's excellent. Where do we go from here? We're at about 1982 or so.

Doernberg: We opened in March of '83.

Spicer: Okay. What store was that, sorry?

Doernberg: Sunnyvale.

Unkefer: Lawrence Expressway.

Spicer: Lawrence Expressway, okay. You moved around a couple of times, I think, or in the valley or no?

Unkefer: No.¹⁶ So, 1987-- so, there was a developer named Kimball Small. He was the big deal developer around then and he was creating this thing called Techmart.

Spicer: Oh, yeah.

Unkefer: [On] Great America Parkway, and he wanted us to put a bookstore in that building because it was connected to the Convention Center and he thought...

Spicer: Kind of a neat idea.

Unkefer: it might be a draw. So, we said okay to that and then at the same time, because we're insane, we had also been wanting to open a store south of where we were on Lawrence Expressway. So, there was all of South San Jose, all of Milpitas, Fremont, all of that part of the valley that people would drive to the Sunnyvale store, but we also thought we're out of space, it's really crowded. We can't expand physically this store anymore, but rather than give up this space, we wanted a much, much bigger place in a location south so that Stanford and Stacey's are in Palo Alto, they kind of have that north part locked up enough that we just really don't want to mess with it, but if we have a store towards San Jose, then we've got IBM, all of that area, and then we've got north of there and it will just be easier-- We got a space that was on North First Street. It was close to I-17... it's not called 17 anymore, whatever, 770?

Spicer: I think it's 17... Santa Cruz Highway?.

Unkefer: Yeah. I thought they changed it. Okay. We got a location that was easy to get to from Santa Cruz, Fremont, South San Jose. It was near 101. It was right off of 101.

Spicer: Right.

Unkefer: So, we had already kind of had that in the works and then Kimball Small comes to us and says "We'd love for you to have a store in this Techmart thing," which seemed like it was going to be prestigious at the time. We're like 27, 28 years old at this point.

Spicer: Wow, so young.

Unkefer: So, this big shot real estate guy comes to us ... it was very flattering to be asked. So, we were like "Sure, let's do it." So, we basically signed up to open two stores like within a month of each other.

Doernberg: Can I jump in...

Unkefer: Yeah.

¹⁶ [Doernberg's note] The original Sunnyvale store never moved; it stayed there until Barnes & Noble closed all the stores in I believe 2001.

Doernberg: There's important context. Rachel came back to run things in '83. So, from '83... and what she's describing happened in '87.

Unkefer: Well, we started to open in the spring of '87. So, we were working on it in '86, but yeah.

Doernberg: Right. So, in the intervening [years], we were pretty successful right away. We were getting a lot of customers locally and then people would hear of us and there was some local press and then we engaged a PR firm to do a big PR rollout¹⁷ and we had a lot of articles written about us in most of the big national computer magazines... just a lot of media. So, we were starting to do more and more mail order business and the reputation was "If you go to Silicon Valley, stop by this bookstore," and we had more out-of-area people coming in. So, we had expanded the Sunnyvale store a little bit. We took over some office space. We moved our back office and then what was the old back office became more retail space, but that was just really maxed out...

Unkefer: I was trying to spare him the year by year.

Doernberg: Sure, but I would say the pressures are that first of all, we're just running out of space in Sunnyvale because there's more and more customers and more and more books that we need to keep in stock because there's just more demand.

Unkefer: We're lucky the fire marshal never came in there during lunchtime because it would have been...

Doernberg: Yeah. People were stepping over each other. It was like playing Twister to get to certain sections.

Unkefer: Yeah. We would have been shut down.

Spicer: Wow.

Doernberg: So, that was going on and also, there's the personal computer explosion. So, there's more and more books coming out and there's more models and we had...

Unkefer: New programming languages too.

Spicer: Yes.

Doernberg: A general bookstore, they have to have the novels, the cookbooks, the gardening books, all the normal sections. So, how much space can they devote to computers?

Spicer: Oh, yeah.

Doernberg: They may have two bookcases, and within those there's operating system books and there's assembly language books and then when you get to the personal computer stuff, they don't have much

¹⁷ [Unkefer's note] This was in 1984.

space to play with. So, they have to be strategic, "Well, the big machines are IBM PC and Macintosh and I guess we'll still stock some Apple II books," but they would just for space reasons, if nothing else, they're not going to carry any books on the TI-99 and they're not going to have any RadioShack books. They're not going to have any CP/M books, blah, blah, blah, and if you came to our store, we'd have 25 books on the TI-99 and 25 books on the Sinclair, like all the books that existed.

Unkefer: Which we got stuck with, by the way.

Doernberg: And that we got stuck with right away, but that was okay.¹⁸ That was okay because we turned them over and eventually-...funny story about that too, but anyway... anyway, so, that's where the space... we had to expand to have everything and no regular bookstore could compete with that. So they wouldn't have *any* TI-99 books and we'd have 25 of them. So, the word got out pretty quickly, like "Oh, don't even bother going to your local B. Dalton's. This is the place you've got to go to." So, that's the reputation we were trying to keep up. So, that's growing over those intervening four years, but then this expansion from one store to three stores-- Stanford University's technical bookstore phoned me one day and said "We'd like to come down and chat."

Spicer: Oh, okay.

Doernberg: I'm thinking "I wonder what that's about." So, a couple guys come down and said "We're pretty impressed with what you guys are doing with Computer Literacy." Stanford had their on-campus bookstore, and also an off-campus location.

Spicer: Yes.

Doernberg: I assume they still do.

Spicer: [On] the corner in Palo Alto.

Doernberg: The corner, right, and they and Stacey's were competing with each other for that non-campus technical bookstore business.

Spicer: Yeah. That became their medical bookstore for quite a while.

Doernberg: Oh, did it? Okay.

Spicer: Yeah.

Doernberg: Right. Technical includes engineers, architects...

¹⁸ [Doernberg's note] No idea why I said this, especially the "right away" – I don't think we got stuck with that many overall. When all the other stores closed out their representation of those books we enjoyed the "long tail" of people coming to us as their last hope of finding it. So we sold most of them over time, and even when we got stuck with some it was well worth it (both for the sales we did of those books, but also for our long-term reputation, another reason for people to refer friends and colleagues to us).

Spicer: Right.

Doernberg: medical, legal... A lot of stuff falls under the category of technical books. So the other stores were serving all those markets. We were the specialists that had this one little area. And it turned out to be it was the hottest area in the book world <laughs>, but still, it was just one subcategory. So we tried to stay under everyone's radar as much as we could within the book industry.

Unkefer: We didn't want to compete head to head with, like, Stanford and their bajillion dollars [endowment],.. <laughs>

Spicer: Oh, yeah,

Spicer: What happened with Stanford? How did that turn out?

Doernberg: Well, so Stanford came down and they said: "We really like what you guys have done with this thing and we'd like to make a deal with you. We'd like to buy your business. But if you don't sell it to us, we're going to come down and open up a store and we're going to drive you out of business." <laughs>

Spicer: Nice. Yeah, thanks.

Doernberg: More or less. More or less.

Spicer: <laughs>

Doernberg: I don't think they used the words 'drive you out of business.'

Unkefer: Oh, no, they didn't

Doernberg: But I think it was more like, "We'll open a big store and compete directly and that's probably not going to be great for either one of us," or something like that. It was just slightly nicer.

Unkefer: I mean, they felt the need to move down the peninsula.

Doernberg: Yeah.

Unkefer: By being on Lawrence Expressway we cut them off from [customers in] the lower part of the Valley.

Spicer: Right.

Spicer: It's also, like, just being on campus is a bit of a barrier for people; you had to find parking and then--

Doernberg: Yeah.

Spicer: It's not a great location, actually.

Doernberg: Yeah. Even off campus University Avenue was tough for parking.

Spicer: Yeah.

Unkefer: Right. That was most people's worst complaint.

Doernberg: Yeah.

Unkefer: They would have passed Stanford from Berkeley or San Francisco to not have to park in Palo Alto.

Spicer: Yes.

Doernberg: Yeah.

Unkefer: Yeah.

Doernberg: That's the context... so when Kimball Small approaches us and we had been thinking about a big store, a big headquarters that would actually have room for everything, and we're, wow, do we do this one? Do we do that [one]? How do we do this? And then Stanford comes down and, says, "We're going to open up a store if you don't sell out," and we're thinking "You know what, if we opened up both stores that would be a pretty big barrier to them trying to come down and opening up one store to compete ... If we had three stores [it would be] like nailing down the Valley.

Spicer: Right.

Doernberg: Rachel may differ, but in my memory the decision to go from one store to three stores simultaneously was a response to Stanford.

Unkefer: It was, but it was also naiveté.

Doernberg: Yeah.

Unkefer: It was also for lack of understanding of what that was going to entail, but, yeah.

Doernberg: Bordering on not quite hubris, in a Greek sense, but we were...

Unkefer: It was kind of our manic...

Doernberg: We were pretty cocky.

Unkefer: We called that our manic thing because ... yeah, two stores at once. Plus we bought a house and moved all in that same period.

Spicer: Other people might say you're just ambitious?

Unkefer: Yeah.

Spicer: Who knows? <laughs>

Unkefer: Yeah, it was really a very rough period.

Doernberg: We really weren't.¹⁹

Unkefer: It was a rough period.

Spicer: Aww, I'm sorry. Yeah.

Doernberg: Yeah.

Unkefer: But so the store in San Jose was like... gosh, was it 15,000 square feet? I want to say 15,000. 10,000 or 15,000?

Doernberg: I would say 10,000 maybe, , 8,000 retail and then a couple thousand of office.

Unkefer: You're right. We'll say 10,000.

Doernberg: Yeah.

Unkefer: And the original Sunnyvale store was closer to 2,000 and Techmart was a little bit less than that. It was maybe 1,800 ... So the San Jose store was like four times the size of the Sunnyvale store.

Spicer: Yeah.

Unkefer: The other thing was that part of Dan's concept very much at the beginning was to have authors come and do talks at the store.

¹⁹ [Doernberg's note] We weren't particularly ambitious in a get rich sense. Of course we wanted to be profitable) but we were primarily focused on being the very best bookstore we could be. We figured financial success would take care of itself if we kept focused on customers. Hence we didn't take on software for Whole Earth (described later), we never wanted to franchise (though we had many many requests), we didn't venture into Palo Alto, etc.

Doernberg: Right.

Unkefer: And so when the Sunnyvale store first opened, it wasn't completely full of bookcases and we had this little open area back by the magazine rack where we could set up folding chairs and have a little bit of a space where people could do little presentations. And that had gone the way of the wind pretty early because we needed more bookshelves and that got shoved out of the way. And so in the San Jose store, part of that square footage was a dedicated big meeting room event space. And then of course Techmart had an event space that we could use for free, so we did that.

So we had then two places to do presentations and we would normally do one to two a month or maybe even more than that by the time we had San Jose. By that time we had employees that were in charge of doing that and doing marketing and stuff, I mean, we had many, many authors come and do talks. Really high level, tech famous important people would come and do talks.

On our wish list of why we need so much square footage is that, plus lots and lots and lots of space. Plus we needed a bigger shipping department, because we were doing a ton of mail order and we were doing internet (email) ordering. We were doing corporate accounts. We were doing all this other stuff. We needed a lot more back office space. So that was that. Techmart just never really went anywhere. It was supposed to be, almost like a showroom exhibit-y kind of thing.

Spicer: Yeah. Trade show kind of thing.

Unkefer: Yeah. It was kind of like a permanent trade show, but then hardly anyone ever moved in and it was [largely] empty.

Spicer: I know.

Unkefer: And after our lease expired, we had to get out of there because it's expensive and we're getting no traffic. And so we looked for another place to go and we found a little store on Stevens Creek Boulevard down in Cupertino, in one of the strip malls. And we thought, well, let's try Cupertino because we haven't really done anything not right off [Highway] 101. Let's try moving a little south. And we were there in Cupertino for probably not that long, and then Apple started constructing their campus at One Infinite Loop, which was at that time they were consolidating a bunch of buildings rented from HP and so they made their first campus in Cupertino.

Spicer: Right.

Unkefer: And in the flagship building, the main headquarters building, they wanted to have a bookstore.

Spicer: Oh, wow.

Unkefer: So rather than opening, rather than adding another one, we' just moved this Cupertino store over to the Apple space and got rid of that lease. And so that became, like, the official Apple headquarters bookstore.

Spicer: Nice.

Unkefer: And it was even tinier. It was really, really small and, never did all that well financially. It was okay, but...

Doernberg: It was open to the public. It was just on Apple's campus.

Unkefer: Yeah. It wasn't just for Apple. Their idea I think was (this was when companies started thinking about having one-stop campus stuff) "Well, people are running [out] on their lunch hour to go get a book, let's just have a bookstore here so they can just get what they want, really conveniently."

Spicer: The books you ordered... were they different for this Apple adjacent store, like heavily Apple-oriented, I presume?

Unkefer: To a large extent, yeah. But, again, we're selling to the developers, the people who are the engineers and stuff. We're not selling books about Apple machines *per se*.

Spicer: True.

Unkefer: We're selling them books about graphics or books about-- For years, before the Cupertino store, we used to sell books to the Apple [Corporate] library. And we had to sign NDAs for many of the corporate libraries because we could tell [what they were working on] by what stuff they were buying, you know, like the scientific things.

Spicer: Oh, interesting.

Unkefer: We could tell, well, like, and remember Borland, the language software company?

Spicer: Sure.

Unkefer: Yeah. So they had a corporate account with us...

Doernberg: Turbo Pascal.

Unkefer: Early on they had Turbo Pascal. And then suddenly, they're buying all these books on Forth or I can't remember what the next one was. C I think, I don't know. They started buying all these books on some language and we're like, "Oh. Okay."

Spicer: How interesting.

Unkefer: Turbo Forth. Turbo C. Turbo Whatever...we could tell what the companies were working on.

Spicer: That's fascinating.

Unkefer: So we signed an NDA, not allowed to talk about it.

Doernberg: I remember Apple, in the early days of the store, wanted us to special order a book they *really* wanted. It was on "icons of the world."

Unkefer: Oh.

Doernberg: Like, what are all the different stop signs used worldwide.

Spicer: Oh, yeah.

Unkefer: It was a big thick reference book about different... Semiotics. It was, like, some of that.

Spicer: Right, yeah.

Doernberg: Signs.

Unkefer: Yeah. I think, yeah. So, yeah. So, like, we could often tell what places were--

Doernberg: And then when Macintosh came out 5 or 6 months later, or something like that.

Spicer: Oh.

Doernberg: And then understood, "Oh, that's what...a visual interface!"

Spicer: That's funny.

Spicer: <laughs>

Doernberg: We were wondering, "Why do they care about this thing? That's weird." <laughs>

Spicer: Yeah.

Unkefer: Yeah. So anyway,--

Doernberg: Stuff like that.

Unkefer: So the Apple Store was really small and really cramped, so we had to really tailor it to what are those engineers working on in there? What are they asking for? Because we just can't keep one of

everything. But we could transfer stuff between stores you know. On a daily basis, we would transfer stuff around [between stores], so that if they didn't have it we could get it to them the next day.

Doernberg: Right

Unkefer: Every store had kind of its own personality and the things that were most popular.

Spicer: So I see that a big factor that determines what you order is your sensitivity to customers when they come in and that's very high touch, one-on-one personal service and it pays big benefits. Did you have any formal method of interrogating your customers, like surveys or do you ever do that kind of user or, you know, customer analysis, what, you know, how many are engineers, how many are--?

Unkefer: I don't know. I don't remember doing that. We had a database of what everyone was buying. Not the people walking in the door.

Spicer: Okay.

Unkefer: But we had 60,000 people on our email list on our combined email--

Doernberg: I think more than that.²⁰

Unkefer: Well, it depends on when, but tens of thousands. And so we had a lot of data about what people were buying that we were shipping stuff to.

Spicer: Right.

Unkefer: We could run reports. Every inventory record in our database had a category and a subcategory, e.g. artificial intelligence: robotics; artificial intelligence: natural language, etc..

Spicer: Got it.

Unkefer: So we had very granular categories.

Spicer: Yeah.

Unkefer: We could print a report any time we wanted of how many books we'd sold on these topics and so we would use that kind of data... but not that much by customer.

Doernberg: There was that one consulting arrangement with... was it Santa Clara or Stanford students? I thought they were coming in and were going to do some demographic type stuff, weren't they?

²⁰ [Doernberg's note] I found a reference for this: in mid-1995 it was 82,000, so probably a bit over 100,000 by 1997.

Unkefer: No, they were doing an employee survey.

Doernberg: Oh, okay.

Unkefer: It was an internal employee survey we wanted them to do. Yeah.

Doernberg: Okay. Yeah. We didn't do that kind of routine demography, psychographic, any of that kind of stuff.

Spicer: Okay.

Doernberg: We were always scrambling. <laughs> We were just constantly just trying to keep up, and it was growing and we always had a lot of smart things that we'd like to do and we couldn't hire enough people and we <laughs> didn't have time to do it ourselves. And that was one of them that would have been a smart thing to do, but we didn't.

Unkefer: I mean, the business was always like pulling, like we were always running to catch up with what was going on at the business.

Spicer: Right.

Unkefer: We could never quite get completely in control of everything the way I would have liked to.

Spicer: Right. Well, tell us a little bit about-- Oh, sorry. Go ahead, Dan, if you had a point.

Doernberg: I was just going to say quickly that, over time, like 10 years in, we actually had an executive team and we had marketing people who had been with us for a bunch of years. And towards the end it wasn't as much the way it had been in the first, 8 or 10 years. That was Rachel's leadership. I wasn't really active in the company so much at that time. But towards the end there was that. We moved out of California where the three stores were. By the end it was not quite so, dragging us along. But for years and years and years it was as described.

Spicer: Yeah. Just every ounce of your being poured into it, I'm sure, 24/7. Yeah. That's the way it is.

Doernberg: Well, at the beginning, we were closed on Sundays.

Spicer: Oh.

Doernberg: And, like--

Spicer: Was that normal back then?

Unkefer: I think it kind of was for retail stores.

Spicer: On the cusp. Yeah.

Unkefer: Yeah.

Doernberg: I don't know. I'm not sure if bookstores normally were, but...

Unkefer: We needed a day off.

Spicer: Yeah. <laughs>

Doernberg: But we were also in an industrial area and "You know what? We need a day off."

Spicer: Yeah.

Doernberg: "So let's just close on Sunday." And, that was for the first three or four months. And, and then--

Unkefer: Not even.

Doernberg: Not even? And then...

Unkefer: Within a week or two, like, every Monday we would come and there would be nasty notes through the mail slot.

Spicer: No.

Doernberg: Yes.

Unkefer: "I drove all the way here from Oakland and you weren't open and..."

Spicer: Ugh.

Doernberg: The first one was, "I made a special trip from Berkeley and you guys were closed."

Spicer: Oh, no.

Unkefer: "You jerks."

Doernberg: "You jerks."

Unkefer: And so we were like, okay, I guess we can't close on Sunday, because we're missing a lot of business and these people are mad at us now, so...

Spicer: Yeah. Well, I could see that these engineers on their day off they want to just browse. I wanted to ask you to just skip sideways a little bit and talk about the mail order aspect of your business and then relate it to foreign sales and what fraction of your business. [that was]. How did that develop and grow and take shape?

Unkefer: Like everything we did, growing the business almost was always customer demand. It was like people would come on trips to the Valley with empty suitcases and then, like, buy stuff and take it back. And then they would call us or by, what, '90... We had email by I want to say '92.

Spicer: Wow.

Unkefer: Early-early, we had email.

Doernberg: I mean, we could send emails through CompuServe early.

Unkefer: Oh, no. But I'm talking about internet.

Doernberg: Right.

Unkefer: Anyway, that's a side thing.

Doernberg: Right.

Unkefer: But people, would write us letters or they would phone us or they would write to us from all over the world and order books. Like someone called and said, "Can you ship books to me?" And we're like, "Sure. Okay." <laughs> "Why not?" you know.

Spicer: Wow.

Unkefer: And kind of every new thing that we did was because someone said, "Can you do this?" And we were like, "We'll... Okay, we'll figure it out." Like libraries, that was a big thing because a librarian from GE²¹ came in one day and she just starts, like, piling books on the counter and we're like, "Who is this person?"

Spicer: Ooh, great. <laughs>

Unkefer: And then she says, "Do you have corporate library accounts? Because I'd like to be able to charge this and have the company invoiced." And we're like, "How does that work? Okay." And then we ran to the stationery store that was in the next shopping center and bought a little invoice book and just wrote an invoice to GE for the books that she picked out.

²¹ [Doernberg's note] The name of the librarian was Dorothy Hutson.

Spicer: That's wonderful.

Unkefer: And then she told other librarians and pretty soon we had an entire corporate accounts business, you know, with a separate person who handled all of that. And then we had to ship them...
<audio glitch 01:42:46>

Doernberg: We wound up hiring the librarian from National Semiconductor.

Unkefer: Yeah. We hired the librarian to handle all the library business and that corporate account business.

Spicer: Nice. Do you remember her name?

Unkefer: Jennifer Armstrong.

Spicer: Great. Thanks. Just to get it on the record. Thank you both.

Unkefer: And so then shipping... mail order was the same way. It was just people asking us, "Can you mail me this book?" "Okay, fine. Give us your credit card number and we'll send it to you or send us a check." And then we hired somebody to pack books full-time, you know, pack boxes and ship stuff out full-time. And then we developed our own software for actually shipping orders. And then we started taking orders by email because we had an email account that was connected by UUCP to NASA Ames Research Center. <laughs>

Spicer: Oh, yes. Right.

Unkefer: Because we knew a guy who was Assistant Administrator there and he said, "Hey, do you want an email address?" And we're like, "Sure." So...our email address went through NASA.

Doernberg: This is Gene Miya.

Spicer: Oh, I know him.

Doernberg: Yeah.

Unkefer: You know Gene Miya? Okay.

Doernberg: Everyone knows Gene.

Unkefer: Everyone knows Gene, yeah.

Doernberg: Gene's amazing.

Unkefer: Yeah. So he set up our email. And then we started to get email from people who somehow found out we had an email address and they're like, "Can you ship me books?" And we're like, "Well, technically, we're not supposed to do any business on the internet²²." So we set up a system where people could email us a list of what they wanted but they separately faxed us, an authorization that had their credit card number and we kept that offline, you know, in a [paper] file and so their email address was like their account key.

Spicer: Yeah.

Unkefer: So they would email us, we would go look up their card, pull it out, charge their credit card and ship them books. And then we integrated that all with our shipping system that we wrote in FoxBase²³--

Spicer: Oh, yeah.

Unkefer: Which was the successor on a multiuser Unix system that we rigged together. Again, we were all self-taught on that. I had a bunch of teenage guys help <laughs> and we all just sort of made it up as we went. But anyway, then so the international business started really picking up with the Internet because people could order stuff in the middle of the night or, you know, times when we weren't open. I mean, we had been getting orders by fax for a long time, too.

Doernberg: Yeah. Let me jump and just add a couple things to that. I just want to say, one of the things, because of those personnel problems, just the difficulty of attracting people, we were always really flexible: this is a smart person, this is a nice person, let's find [them something]. You know, they're tired of this job or they can't work full-time, what if we carve out some other thing and they can do something part-time <laughs> and [we can] keep them. And we had a lot of people that we were constantly, finding different roles for and being, you know, a little bit flexible... very flexible.

Unkefer: Well, creating jobs, you know, new jobs.

Doernberg: Creating jobs that didn't exist.

Unkefer: But also, we had kids that came as, like, 15- or 16-year-olds after school, high school jobs, and ended up working there for years.

Spicer: Wow.

Unkefer: You know, getting--

²² [Doernberg's note] The Internet at that time was still a government research network and commercial use was not allowed.

²³ [Unkefer's note] This was late 1980s, early 1990s.

Doernberg: That's the thought I was trying to get to. When Rachel said about teenage programmers...At the very beginning, one of the guys in our inventory department, Steve Wertz, who unpacked the books was a little bit interested in computers and he had fooled around with programming. And reasonably soon, Rachel started having him help her with programming.

Unkefer: Programs.

Doernberg: And he was with us for like 10-12 years.

Spicer: Oh, wow.

Doernberg: I don't want to give a false impression that it was all just a bunch of teenagers doing all this stuff. Tuan Nguyen, a Vietnamese immigrant programmer, was with us for 5, 6, 7 years or-- I mean, as long as we had the company.²⁴

Unkefer: A pretty long time.

Doernberg: I just don't want to give the wrong idea. A lot of these folks started... Cherrie Chiu started out as an inventory person...

Unkefer: Unpacking...

Doernberg: Unpacking... she was with us for 10 years and became the heart and soul of the marketing department.

Spicer: Wow.

Doernberg: And there were a fair number of people like that who, were with us for a long time, including the programmers.

Unkefer: Right. So I actually wrote or supervised people writing an entire bookstore inventory system including cash register POS, back office stuff, ordering, shipping, corporate accounts. Like, it was the same thing, it was like every time things came up and people were like, "Well, why are we doing these on paper forms? How come we can't do this in the computer?" And I'd be like, "Because we don't have time to write that." And so by the end there were, 3 or 4 different people that I could assign jobs to. And they had all worked there, so they all understood. I guess Tuan didn't. Well, I think I made him work there for a little while first. But most of them were homegrown and so they understood how stuff worked and it was really easy to tell them, like, "Hey, we need a module that'll do this." And they knew what I was talking about.

²⁴ [Unkefer's note] This is misleading—he came in the early 1990s and was there until 1997, not the entire time we had the company.

Spicer: Right. They understood the business logic underneath.

Unkefer: Exactly.

Spicer: Yeah. Well, you know, it speaks very highly to Dan, you and Rachel as just decent human beings and great managers that people would stay so long, so that's great.

Doernberg: I mean, it was a culture... it was both. There was sort of an 80-20 rule. There was 80 percent churn... maybe not 80. Maybe it's 65-35 or whatever.

Spicer: Right.

Doernberg: But, there was a good number of people who churned and they were there for a few months and then they moved on. But there was a large enough core that ... this is important I think to understand the whole picture. For us and for them, Computer Literacy was like being a kid in a candy store; every day you'd have 300 people come in and say, "Oh, my God. I just love this place. And I just love coming here and I come here every time I come to town. And I've sent so many people to you. I could just spend all day here." And our customers were really nice.

Spicer: That's wonderful.

Doernberg: I mean, we had *some* shoplifting, I'm sure.

Unkefer: There were some jerks. There were a few jerks, but.

Doernberg: Well, yes, but of course.

Spicer: Of course.

Spicer: Inevitable.

Doernberg: Out of 20,000 people, you're, you're guaranteed to have a small number.

Spicer: Right.

Doernberg: But overall, our customers were great. And they liked coming there and you just got all these positive strokes for being the best in the world. And everyone who worked there I think pretty much felt good that, gosh, we're serving this area. And we had the author talks... a lot of articles talked about Computer Literacy as, (this may be overstating it, but this is their wording) the cultural center of Silicon Valley. The books and the interactions you had just talking to other customers and talking to the staff and coming for these talks. And [we did] the talks from the beginning, like the grand opening was an author from Xerox PARC [David Robson who] came down and did a presentation about the first book that had

come out on Smalltalk, which was a direct outgrowth from my reading *InfoWorld* days when *InfoWorld* was so excited about Xerox PARC and the Alto and Smalltalk and all that.

Unkefer: Smalltalk was, like, the first object oriented language, right?

Spicer: Yeah.

Doernberg: Right, right.

Unkefer: That was the thing.

Doernberg: We had Don Knuth and Alan Kay... Alan was a customer. I don't think Alan gave any talks. Ed Feigenbaum and Nils Nilsson came down from Stanford to do [talks about] artificial intelligence. And, assembly language and PC internals and--

Unkefer: Gene Amdahl did one of the...

Doernberg: Yeah, yeah. Gene Amdahl, Dennis Ritchie.

Spicer: Wow.

Doernberg: Some of the people you just never heard of, just guys who wrote whole books on technical topics. Andrew Tanenbaum did a Minix retrospective²⁵ in Communications of the ACM had a retrospective...

Spicer: I saw that. The MINIX [talk]. I saw your article.

Doernberg: The MINIX, right. And I later, found my letter to him afterwards. But he talks about that evening.

Spicer: Wow.

Doernberg: He came out to do this little bookstore signing and thought there'd be 5 or 10 people and they'd chat. And we had 300 or 400 people... that was unusual.

Spicer: Awesome.

Doernberg: But he was there for five or six hours; an hour presentation and then hanging around until midnight talking to people.

²⁵ [Doernberg's note] [Lessons Learned from 30 Years of MINIX](#) (March 2016)

Spicer: How lovely; for him, especially.

Doernberg: Yeah, yeah. Well, he was in the Netherlands and I don't know the whole story. An American émigré. But anyway, it was really cool. He was in the country and he came by the store. And that was a big deal that he remembered, 30 years later, 40 years later or whatever. Thirty years later, I guess.

Spicer: Right.

Doernberg: But anyway, the people that stayed with us...there was a core staff. Chris Macintosh was our Operations Manager, she was a Wharton grad. And Lisa Chan was a CPA who was our Controller. Tracy Russ was our Marketing Manager. Vince Emery was the marketing manager before her. And we had people who were really smart and competent and cared a lot about the company. And some [other] people, I think of Brent Heslop in particular, but other people who also were with us for a lot of years and really cared about the company and really invested a lot of themselves. Brent and another ex-employee became computer book authors.

Unkefer: Several of our ex-employees became authors after they left the company.

Spicer: Oh, that's cool.

Doernberg: So that's the thing... especially at the beginning, there were teenagers and churn and seat of our pants and all that stuff. But because Rachel's so good at systems, and because it really was a special environment, a lot of people who didn't have formal degrees just came up through the ranks. And, yeah, our Shipping Manager, a guy named Daniel Fey was with us for like seven years, and he knew everything about shipping.

Unkefer: <laughs>

Doernberg: [imitating Fey] "Oh, Australia? Don't go DHL to Australia. It's UPS to Australia. What are you thinking?" <laughs>

Spicer: Those kind of people are very useful.

Doernberg: Absolutely.

Unkefer: Yeah.

Unkefer: But I think the other thing too with the teenagers is we had a number of people who did come as teenagers who didn't go to college, who just didn't want to go to college.

Spicer: Right.

Unkefer: And they ended up with more responsibility than they would have probably gotten at a lot of other jobs because, as we saw somebody could handle more, we would give them more. And we would try to encourage people to continue to take on more responsibility. I always felt good about that part of it, that people were entrusted with a lot. If you went to a chain bookstore or most other retail jobs, you would not really get to make decisions or do anything beyond the very basics. And we had a lot of people that moved up through the ranks.

Doernberg: Well, I mean, our company was not-- <laughs> Even more so than us, I would say... if you want to get a little bit of a sense of Computer Literacy, there was a documentary done about Tower Records and Tower Books²⁶.

Unkefer: Oh, yeah.

Doernberg: And that place ...I take my hat off to them.

Unkefer: It was bonkers, yeah.

Doernberg: <laughs> The teenagers are working their way up to being international franchisers and they're just running [things by the] seat of their pants.

Spicer: Wow.

Doernberg: Having fun in the stores during the day, cocaine at night.

<laughter>

Doernberg: Wild, crazy stuff. And we were, two fairly straight-laced moral people from the Midwest...

Unkefer: Pretty boring.

Doernberg: We didn't...Yeah, we were boring. We didn't do a lot of that. But that documentary, we watched it just a couple months ago. And it really did capture that flavor of just finding yourself in a situation where you're successful at a thing and then figuring out "Okay, what's the next step from here? And now what's the next step after that?" And trusting the people around you to jump in and take those challenges on along with you, by your side.

And just one other super quick thing that we always took pride in: Computer Literacy was like the United Nations; we had people from all different backgrounds and you know, we just never had [problems]... There was one manager that gave a Muslim employee an issue about breaking off for 5 or 10 minutes to pray [in the] middle of the day. And that manager got fired. And we had one report, probably it happened more, but we knew of one person that was sexually harassing some of the people they were supervising

²⁶ [Doernberg's note] [All Things Must Pass: The Rise and Fall of Tower Records](#) (2015)

and that person got fired. But in general, it was a nice... we treated people I think pretty well. Some things I regret. You know, some personality things that didn't work out. But overall, we really tried hard to treat people reasonably and it just made for a nice environment I think for folks.

Spicer: Well the goodwill that Computer Literacy has even now, decades later, is remarkable. And you really touched people's lives, you know. I'd just like to make sure that's on the record too. Now just as we wrap up, did people have a choice as to where to get their technical books for much of your [existence?] Amazon is not in the picture yet. So let's say especially foreign buyers. How did they get into the habit of ordering from you for their technical books? And how did they hear about you, for starters? And then how did they see you as... you know, like why wouldn't they go let's say to McGraw Hill? Or maybe those channels are just not available to individuals, I don't know.

Doernberg: They were available to people, McGraw Hill and other places. there's a bunch of factors. Part of it was just the word of mouth. Hypothetically, let's say you're an engineer in France. Our first sale <laughs>, before we actually opened the store, was a guy from France [who] was eating at the Togo's Sandwich Shop on Lawrence Expressway by our original store? Is that still there?

Spicer: I can't say for sure.

Doernberg: Anyway, the front door of Togo's sandwich shop, was, like, 20 yards from our glass window where you could look in our store.

Unkefer: Not even that far.

Spicer: Excellent.

Doernberg: Not even, 15 yards.

Spicer: Great.

Doernberg: So a guy from France is visiting Silicon Valley and he sees <laughs> all these computer books which we had in the window. That was our advertising before we opened. And he sees a book that he wants and he's knocking on the door, "I've got to buy this book. I've been looking for this book," or whatever. I can't remember the exact conversation. But we said, "We don't have a register yet. We don't have any stuff. We're not open yet." <laughs> He's like, "I've got to buy this book." So we just wrote down his credit card and he walked off with the book.

<laughs> The first of many. But people would come to Silicon Valley from wherever they were and they'd know about us. Our bookmarks said, "Order. International Shipping." And so, they would go back and they would tell their friends. I mean, certainly not everyone...it's not like we had 100 percent of the international computer book market! But there was a good chunk of people all over the world that just knew, if you're looking for something, the direct path the place you can go to check with them that's almost for sure going to have it is Computer Literacy. And if they don't have it, they'll get it.

Unkefer: So we had a mail newsletter that we mailed out hypothetically once a month. Well, first it was once a quarter then it was monthly, but the deadlines were squishy.

Spicer: Yeah.

Doernberg: Some people could take that as a gentle nudge or dig. <laughs>

Unkefer: So we would send out this newsletter, which was kind of like a little book review.

Spicer: I remember.

Doernberg: I sent Dag a sample.

Unkefer: Oh, okay. So we would mail that out and that would go worldwide and then people would pass that around too. And then we'd get letters or phone calls back and say, "Please put me on your mailing list." And that's how we accumulated tens of thousands of people on the mailing list. Also within companies, because all of the Silicon Valley companies had offices all over the world...

Spicer: Ah, yeah.

Unkefer: So HP Tokyo people knew about [us], they had to visit Sunnyvale periodically or Mountain View or whatever. So there was just a lot of passing around of stuff. And then when we got magazine articles, that made a huge difference to be in international magazines. Then people would contact us because of that.

Doernberg: A couple more really important things. One early thing was the Whole Earth Catalog, this is back in '83, and they did a computer software version and they chose us to be the mail order fulfillment place for all the books. And they also offered us software and we turned it down because we wanted to specialize... we were already, like, "Oh, my God. We can barely keep our hands on the books."

Spicer: Oh, I see.

Doernberg: And we were, like, "software?";... it's unknown how we would have done. Potentially, we could have made just a ton of money. But we didn't feel like we could necessarily do a good job and it wasn't something we had any expertise [in] particularly.

Unkefer: Yeah.

Doernberg: And we were going to stick to our knitting. So we turned that part down. So that was Whole Earth. And then we were also in all the early books, and lots of the articles, about the Internet. <laughs> Because we were the first bookstore, maybe we were the second, but I can't... We were the first one to have a page, I think, on the web.

Spicer: Oh, wow.

Doernberg: And maybe the first to take orders on or, you know, have an internet presence.

Spicer: Mm-hmm.

Doernberg: So around '93, '94, '95, all these books are saying, "Here's an example of a good business that's on the internet, Computer Literacy Bookshops."

Unkefer: And it would have screenshots and illustrations in the book, yeah.

Doernberg: Yeah. and then the last thing was because our customers were all the techies who were on Usenet and all these other pre-Internet networks, they would pass around on their company internal networks and on Usenet "You can find this book at Computer Literacy." And 1,000, 10,000 people would see that. So among the techies, early, early on, all over the world, people had been exposed to "there is this place...". And they wouldn't necessarily record it, but they would know where to find us.

Spicer: You're sort of building the brand. When it comes to your mail house, you must have had a pretty healthy postal bill. But I take it that's--

Doernberg: And printing bill.

Spicer: Yeah and printing. That really comprises your advertising in a sense for the business, right?

Unkefer: Yeah. Oh, yeah.

Spicer: You didn't otherwise... you didn't take out ads or stuff like that?

Doernberg: Well, we... very rarely²⁷.

Unkefer: Yellow pages, the phone book. The phone book, yellow pages.

Doernberg: We did some yellow page ads also in Los Angeles and I think maybe at some point Boston around... maybe we didn't. I can't remember, but L.A. we did, and some foreign phone books we did. ...So when Rachel was talking about the publishing world was a pretty leisurely world... it was organized by season; you had a winter season and a summer season or fall and spring or whatever, and the

²⁷ [Doernberg's note] Maybe "infrequently" instead of "very rarely". We ran ten or so publisher coop ads in the *San Jose Mercury News* during our first six months (including our Grand Opening on May 2nd, 1983 which was not coop, I didn't know about that then). Over the years ran occasional ads in the regional *Computer Currents magazine*, local user group newsletters (inexpensive and a way to help support them), and we experimented a few times with ads in national magazines. We also got free publicity from the *San Jose Mercury News* because they were good about including our free author talks in their short listings of upcoming events in, as appropriate, either the Sunday Computing or Business Monday sections. When the Tysons Corner, VA store opened we also occasionally ran display ads in the *Washington Post*.

publishers would put out catalogs to the retail stores twice a year, and if a book didn't make it into the one catalog, then, six months later, it would come in the next catalog... but we were always needing to know what's coming out soon and what's coming up.

So, somehow, I'd gotten this sales rep from Prentice Hall to share with me the editorial stuff²⁸ the editors were sharing [with them]; here's the stuff that's coming up, and that would have capsule descriptions of the book and the ISBN number (the part number), and a description, and the title, and we just got these basic sheets that I would look through... so we were getting information often three or four months before they appeared in the catalogs that all the other bookstores were getting it from.

And it's possible that some other bookstores, technical bookstores, would also get that stuff, but I don't think they did, but... In any case, so early, I think it was '83, but maybe it was '84²⁹, I got one of those sheets, and there was this book called "The UNIX Programming Environment" by Kernighan and Pike, and we didn't know at the time who Rob Pike was, but Kernighan was [of] Kernighan and Ritchie [fame], and that was already a hugely popular book in store, and I knew who he was and all that stuff, and I'm like, "Rachel, Kernighan's got a new book, and it says it's coming out now," and Rachel... and I were like, "We should..."

Unkefer: It's published, but it's not in the catalog?

Doernberg: Yeah, it's not in the catalog yet. It says it's available. So, I called Prentice Hall, and I said, "Do you show this book in stock?" And they said, "Yeah, we've got a thousand copies." That was for the nation. So I told Rachel "They've got it in stock." I'm the buyer, and I was normally the aggressive person, but on this one Rachel said, "We should go big." So, we ordered five hundred of the thousand that were available to the whole country.

Spicer: Oh my gosh.

Doernberg: And we did a big display ad. At that time, we weren't on the Internet, or maybe it was [the] ARPANET at the time. I don't know, but anyway, we were not on the network, but we did a big display ad in the *San Jose Mercury News*, and it said:, "You've got the C programming book. Now, get this one, 'UNIX Programming Environment,'" and no one had heard about that book being available yet. It probably wasn't supposed to be officially released, but the word went out on the net that there's this new UNIX book by Kernighan, and Computer Literacy is the only one that has it.

Unkefer: In the country.

Spicer: Amazing, wow.

Doernberg: And so, that was one of the ways that we cemented our reputation, got the word out, whatever.

²⁸ [Doernberg's note] 1-2 long paragraphs per book overviewing the contents with a bit of author bio information as I recall.

²⁹ [Doernberg's note] The display ad ran November 27, 1983.

Spicer: Right.

Doernberg: And then when a book was unexpectedly popular, we had a joke... but it wasn't really a joke... the big national wholesaler was Ingram. These technical books, even a really popular one, they might have two or three hundred copies, you know, I'm just making numbers up, but they didn't have unlimited number of copies ... and if *BYTE* just did a really positive book review of something then we might like, "Hey let's just clean out Ingram, (i.e. order up all the copies)".

Unkefer: So, the distributor was the fast fulfillment route.

Doernberg: Yeah, so that's if someone's out of stock, they can...

Unkefer: The publisher might take a week or two.

Doernberg: Yeah.

Unkefer: The distributor had warehouses all over the country, and you could get stuff overnight or two days.

Spicer: Oh, neat.

Unkefer: So, that was the fast distribution channel that we would sometimes just buy all of something that they had.

Doernberg: So, basically, we'd be buying the nation's short term supply of that book.

Spicer: Now, did you sell all the Kernighan ones, the five hundred copies?

Unkefer: Oh yeah.

Doernberg: Oh yeah.

Spicer: Truly?

Doernberg: Oh, we sold thousands. We sold ten thousand Kernighan and Ritchie books over the course of our...

Spicer: I mean the new Kernighan book.

Unkefer: Yeah.

Doernberg: Oh yeah, no worries.

Spicer: Yeah. Wow, that's so impressive.

Doernberg: Most of those times, we weren't exactly being greedy. We needed those for our own customers, but we realized later that a fringe benefit of buying the nation's supply of a book was that then

on the Internet, everyone's like, "Hey, I can't find it in my local store," and then someone else would go, "Computer Literacy has a couple hundred."

Spicer: You're the only ones, yeah.

Doernberg: Yeah, so...

Spicer: That's great. Oh, you deserved to have your risk and reward go together. That's good. That's how it should be.

Unkefer: Yeah.

Doernberg: Yeah. So, anyway, so that was the long answer to "Well how do all these people hear about you guys?"³⁰

Spicer: Yeah. Oh, that's great. Thank you, wonderful.

Doernberg: Yeah.

Spicer: And then the fact that, like you mentioned earlier, you became a destination sort of in and of yourself is really the magical part, I find, because how many years were you running the store in total?

Unkefer: From 1983 to 1997. So, fourteen--

Doernberg: Yeah, March--

Unkefer: So, I was also going to say that the San Jose store, after we opened that one up, one day, I was out in front of the store, and I look, and there was this big bus that pulls out in front and then disgorges this massive group of Japanese tourists.

Spicer: Wonderful.

Unkefer: And then we found out that on some tour bus line, we were one of these stops for the tour bus.

³⁰ [Doernberg's note] Somehow we failed to note some other channels: (1) The first, critically important, was that we were the official bookstore at many very large (tens of thousands of attendees) trade shows, including Interop and Software Development (sometimes in the Bay Area, sometimes not). These bi-annual shows involved setting up a fully-functional large bookstore in a couple days, shipping in and organizing/displaying thousands and thousands of books, and then breaking it all down after 3-4 days; (2) Relationships with a few computer companies (e.g. SCO and Borland) where they circulated custom Computer Literacy-branded book catalogs we customized for their customers; (3) We handled textbook sales for the UC Santa Cruz Extension program in the South Bay. (4) I did a handful of interviews with famous authors for our newsletters that were widely circulated on the Internet, and two were reprinted in journals: the May 1987 [IEE Software](#) excerpted my interview with Ken Thompson, and my 1993 [Don Knuth interview](#) was translated into French and reprinted by the Société des Personnels Enseignants et Chercheurs en Informatique de France in their May 1995 magazine. I'm most proud of the interviews with Knuth and [Edward Tufte](#) (latter published 1997).

Spicer: Excellent. I could totally see that, absolutely. I would put it at the end, actually, so people don't have to carry their books.

Unkefer: Right.

Spicer: But yeah that's right. That's great.

Doernberg: I found some stuff here, as I'm going through the attic looking for stuff, I've got correspondence ... somebody wrote a Japanese language book overviewing Silicon Valley, and they gave copies of the book to the Japanese airlines, and they would have a copy of the book, like a magazine, for the customers [to read] who were flying to San Jose and San Francisco. There would be a copy of the book on the airline that they had to leave, they couldn't take it with them, and in the book was "Reference this coupon, and you get ten percent off at Computer Literacy."

Spicer: Oh nice.

Unkefer: I don't remember that.

Doernberg: Yeah, I didn't either. I've got the memo: "Hey, programmers, we have to add a coupon code, QLA17 or whatever, ten percent off to the Japanese airline customers."

Spicer: Yeah, little promotions. Well, let's wrap up and talk about the end of the company, how you sold it. It didn't stop functioning. It got sold.

Doernberg: Yeah.

Spicer: Why don't you wrap up the story for us how that happened and then quickly just tell us what you've both been doing over the past forty years? Sorry, that's kind of a long chunk, but you know...

Doernberg: Well, let's see, last Thursday...

Spicer: In capsule form. Yeah, I know. I know.

Doernberg: Yeah, so...

Spicer: Thank you.

Doernberg: I don't know that we've actually told this part of the story much before, but we actually tried to sell the company many times,...probably three or four efforts over the years, because it was taking a real toll on our personal lives. Rach and I have been pretty much together every hour of every day for the last forty-two years, which is a testament to her, but anyway we were just in this very intense twelve-hour day, seven days a week startup phase, and pretty early, we were like, "I don't know if it's not worth it, but this is close to not worth it," you know, the toll it was taking. So, we explored selling the company maybe as early as '85, within a couple years. We had had all this publicity. We were sort of [tech] world famous, and we explored it. There was an M&A(mergers and acquisitions) company that specialized in retail at the time, and we paid a bunch of thousands of dollars for them to evaluate us, and they said, "You're not

going to get much money for your business because, in retail, it's all about franchising. You have to show that your concept can be replicated elsewhere, and that's where the big money is." So that was another reason why we wanted to expand to at least one other store in Silicon Valley., so that will show that it's not just one specialty thing. There's more potential. So, we expanded to three stores, and then we went back to them again and said, "Hey, now we've got three profitable stores," and they did their analysis and said, "Yeah, but they're all in Silicon Valley. A buyer needs to see that this will work outside Silicon Valley."

So, then we opened up a store on the East Coast, partially because we wanted to move back to the East Coast. We had family [there], and Silicon Valley was just a little bit too frenetic for us personally. Our [Silicon Valley] friends were like, "Well, we can't really get together for the next three months because we're trying to ship a product, but maybe after that," and we had little kids, one little kid.³¹ Anyway, we wanted to move back to the East Coast. So we opened up a D.C. store that was both our personal springboard to get back, but also "Hey, now we've got a profitable store on the East Coast, and we've got three profitable stores on the West Coast. So, now clearly, any retail buyer can see that there's a lot of potential." Also, there was a technical bookstore in Dallas that was for sale, and we flew down there to maybe [see] if we might want to open a Texas store, and [also checked out] Route 128 in Boston, but 128 was a ring, and there was no real geographic [center] there where there'd be high concentration, where a lot of people would come out to us.

Spicer: Right.

Doernberg: So we didn't do that, but anyway, so we had all these retail-oriented efforts, and what finally enabled us to sell the company was venture capital and the rise of the Internet. And through a story that I won't go into, the company that bought us had venture capital.

Unkefer: They were a startup, yeah.

Doernberg: They were a startup. And they basically could acquire our customer base and our revenue, and they had a successful IPO after they bought us. They bought us in May of '97, and they went public in November of '98, so within a year and a half. It was basically our company.

Spicer: Okay.

Doernberg: And their narrative was, "We're a small startup, and now a year and a half later, our sales are x millions of dollars a year."

Spicer: Yeah.

Doernberg: And that story sold, and they did very well. That was the dot-com boom, and...

³¹ [Doernberg's note] I do know how many children we have! We engaged various M&A intermediaries in 1985, 1989, 1990, 1995, and 1996. Our children were born in 1989 and 1993, so 0-2 children depending on which year's M&A effort is being referenced.

Unkefer: And the bust.

Doernberg: And then there was the dotcom bust, and they were a casualty of the dotcom bust, and it was...

Unkefer: Well, they ended up selling the retail stores to Barnes & Noble for pennies on the dollar of what they had been valued at, and then within six months I think, Barnes & Noble had shut down all of it, ...

Spicer: Wow. Can you mention their name?

Unkefer: Who?

Spicer: The company who bought you?

Doernberg: CBooks Express was their initial name, yeah.

Spicer: Okay.

Doernberg: And then they rebranded to Computer Literacy--

Unkefer: Inc.--

Doernberg: Bookstores and Online.

Spicer: Okay.

Unkefer: And then Fatbrain.

Doernberg: And then they changed it to Fatbrain.

Spicer: I remember, okay.

Doernberg: And then they also spun off like we did. We had a book publishing spinoff, and the new company also did a spinoff called MightyWords that...

Unkefer: It was like a self-publishing platform. It was like a...

Doernberg: Well, mid-length kind of like technical and other...

Unkefer: No, it was like Amazon...

Spicer: Their self-publishing...

Unkefer: Yeah.

Spicer: Yeah K, starts with a K, I think.

Unkefer: I can't remember.

Spicer: Yeah, I know what you mean.

Doernberg: Stump or some short s-word³², I think, but anyway, but it was the idea that the Internet's going to allow everyone to express themselves ... anyway... but there's all this stuff going on--

Spicer: It's KDP, Kindle Direct Publishing.

Unkefer: Oh--

Doernberg: Oh yes, okay.

Unkefer: It was called something else before, though.

Spicer: Yeah, this was long before that. Sorry.

Unkefer: So the short part of it is, from a personal standpoint, we had moved to the East Coast. Most of the employees were still on the West Coast. We had about a hundred employees at that time, most of them on the West Coast. I was supervising people from the opposite coast, going out there occasionally, and mostly working out here, and our kids, when we moved here, were one and a half and five and a half. That was '94 when we moved here. There just came a point ...I was running the company at that point, Dan was doing other projects... I just was like, "I can't do either thing well, I can't take care of my kids properly, and I also can't do the business...whatever time I'm spending on one thing, I'm feeling like I'm neglecting on the other thing, and I can't sell the kids. So, we have to sell the company."

Doernberg: And we tried. We could not find a buyer. <laughing>

Spicer: You tried to sell the kids? Oh my.

<laughter>

Unkefer: So, the only solution at that point was this is untenable. We have to find a way out at this point ...

Spicer: Right.

Unkefer: So, this is '97 ... Amazon is just beginning to be a thing, and the Internet is exploding, and the competitive pressures are starting to be felt a little bit, but mainly, just from a personal standpoint, it was like I just I cannot run a hundred employee company right now with two little kids at home.

Spicer: Wow.

³² [Doernberg's note] I may have been thinking of BookSurge.

Unkefer: And so, that was why we started again looking and then made the connection with the startup that had the venture capital money, and we kind of pitched it to them saying, "Look, you can either spend the venture capital money ramping up this startup, or you could just spend that money to buy an already going company that's already profitable."

Spicer: With a great brand.

Unkefer: Yeah, exactly.

Doernberg: Yeah, with a good brand.

Unkefer: So, it was a good fit at that point, and then it allowed us to exit in a way that... we could have a personal life.

Spicer: Nice. Great.

Doernberg: Just for the historical record, there actually is an interesting, important aspect of that story. So, it was a little bit unpleasant when the startup company started up. One of the things they did was hire -- poach -- some of our employees, and their business was also in Sunnyvale, like our original location.

Unkefer: They didn't have a brick-and-mortar store.

Doernberg: Right, but their mailing address was Sunnyvale, California, which a lot of people still associated Computer Literacy with Sunnyvale because that's where the original store was, and their domain name was [only] one letter different from ours.

Spicer: Right.

Doernberg: So, we were actually the first company... we were one of the first companies that trademarked our domain name.

Unkefer: I don't know if it was one of... I think we were the first, honestly.

Doernberg: I'm not sure if we were the first to trademark it, but trademark law says the test for whether something infringes on a trademark, is whether something is confusingly similar. So, we said, "Look, there's this competitor who's poaching our employees and is based in the same city as our most famous original store, and their domain name is one letter different from our trademarked domain name."

Spicer: Yeah, right.

Doernberg: So, when we were going through that M&A process, we made what I think was a very logical argument: "Look, it's in your guys' interest. This is just a short path to go ahead and purchase our company," and again, we'd been trying to get out for years, but...

Unkefer: And avoid a trademark lawsuit.

Doernberg: Yeah, but we actually did file the first trademark lawsuit³³ in the U.S. against that company for infringing on our trademark.

Unkefer: Domain name.

Doernberg: Yeah, their domain infringed on our trademarked domain name, and that lawsuit never went to trial because the negotiated settlement was [that] they purchased us, and so that's the full story of how that came about, and it was really bittersweet in many ways.

At a personal level, coincidentally, when that deal closed... I mentioned we had this exceedingly loyal employee named Cherrie Chiu, who that weekend was getting married, and she had been with us for ten years, and just... she put her heart and soul in our company, and we were invited to the wedding. So we flew back with our kids to her wedding, and we knew that when we had signed the papers to sell the company... and we talked with the other managers [Lisa and Chris], who knew about the sale, and we said, "What do you think? She's going to come back from her honeymoon, and we'll be gone, and the company is sold, and that's such a cruddy thing to do to someone...but on the other hand, you're starting your honeymoon, why worry about your job and what's going to happen and all that."

They said, "Just don't say anything," and that's the way we were leaning. So, we went out for the wedding, and we saw all our people, and then we signed the papers. She came back from the honeymoon, and we were gone. The company was sold, and anyway, so it was very bittersweet over the next three years, which of our employees were able to keep jobs and all that... and she was with them until the end, until Barnes & Noble closed down the store.

Spicer: Wow.

Doernberg: She went out in the middle of the night, and she took down the original redwood sign.

Unkefer: From the outside of the store.

Doernberg: From the outside of the Sunnyvale store, the original sign with our...

Unkefer: It was like ten feet long.

Spicer: Oh wow.

Doernberg: Ten feet long wood, redwood, weighs two hundred pounds or something.

Spicer: Yeah, right.

Doernberg: And shipped it to us without any advance warning.

Unkefer: On a truck.

³³ [Doernberg's note] In 14 years of business this was the only lawsuit we initiated, and only one person ever sued us; we went to considerable pains to avoid problems, seek win-win solutions, etc.

Doernberg: It showed up on the afternoon of 9/11.

Unkefer: This giant long package with no return address on a truck. The truck pulls up. "I have a package for you. It's this giant thing." I'm like, "I don't know what that is," and the truck driver's like, "Look, you want it, or I should take it back? You've got to decide." "Okay, fine. Put it in the garage," and we didn't open it for a couple days because we were like "Is it possible someone sent us a giant bomb, or what?"

Spicer: Well, yeah, right.

Doernberg: It seemed unlikely, but <laughing>--

Spicer: Yeah.

Unkefer: But it was scary because it was a weird time to get it, but we--

Spicer: Oh my gosh, I wonder--

Unkefer: We still have it.

Spicer: She must have had help.

Unkefer: Yeah.

Doernberg: Oh yeah.

Unkefer: I think they rented a cherry picker lift thing to get up there and un-bolt it from the building.

Spicer: That's hilarious.

Spicer: That's true dedication.

Doernberg: Yeah, it was really amazing...we had a lot of people who really cared about the business, cared about the customers, liked working with us. I still, maybe once every couple of months, have a dream where I'm working back at the store and trying to... do I order this book, or do we open something ... despite the fact that it destroyed my personal life, but even so, while I'm working on the job, it was just so much fun, and the people were so nice, and I will also say there was that optimism that computers and the Internet were going to make the world a better place and...

Spicer: Right.

Doernberg: It was all utopia, and all the world is connected, and I remember the first time with email, corresponding with one of the authors, and I sent them an email, and they're across the country, and I get a reply in thirty seconds, and I'm, "Wow, this is turning over five or six iterations that would have taken three weeks."

Spicer: Exactly.

Doernberg: And I'm just thinking how can this be anything other than an unmitigated blessing.

Spicer: A good thing, yeah, right.

Doernberg: And nothing but good. And so, we felt like Apple and Amiga and all these companies were doing neat things, and yeah, we're part of that. We're helping bring about this great era... and we were young, and it was exciting. So it was a hard thing to give up, but we actually needed to, and it was time.

Spicer: Yeah.

Doernberg: So, anyway, that's kind of the big picture.

Spicer: Oh, that's wonderful. Is there anything you want to say, Rachel, as we get ready to sign off?

Unkefer: Well, you'd said like what have we been doing.

Spicer: Yeah.

Unkefer: So, mostly, we've been doing for the last--

Doernberg: Twenty-five years.

Unkefer: Almost twenty-five years.

Spicer: Right.

Unkefer: Lots of different volunteer jobs. So, I've done all kinds of different managing ... I started a nonprofit. I've worked [as volunteer] for lots of other nonprofits, and then, my other... my big hobby is I do genetic genealogy, which is using DNA for genealogy. So, I've done a number of studies of Y chromosome migration studies, human migration, and things like that, again a thing that I'm self-taught or learned from all the other people who were doing it because there's no college class for that. So, we all just kind of helped each other learn, and I've been doing that since 2009.

Spicer: Fascinating. I find genealogists are some of the friendliest people around. They really want to help you. Every experience I've had with doing genealogy, people just like bend over backwards to help you. I've never seen that in any other field really how generous they are. How about you, Dan? What's been going on for the last twenty-five years?

Doernberg: Well so, after Computer Literacy, we kept the publishing company, the little spinoff, and we let most of the titles go out of print, but a few of them we kept, and a few... we did publish a couple other computer history books. And so, one of the books has a really interesting story. It's called "the Lions' book", [Lions' Commentary on UNIX](#).

Spicer: I'm so glad you brought that up. I'd love to hear the story again.

Doernberg: John Lions was an Australian professor, and he took several sabbaticals, but to Bell Labs where Thompson and Ritchie had invented UNIX, and to Berkeley, and they're showing him this new operating system they wrote called UNIX, and he said, "Wow, that looks really cool, tell me how it works,"³⁴ and they explained how it works, and he's writing notes, and he continues elaborating, and he basically takes... he writes a commentary, line by line of code.

Unkefer: He literally documents the system.

Doernberg: Documents, but also, adds his explanations for his students for an operating systems course. Like here's how UNIX works, and here's all the code. And AT&T had a total fit. And so they signed a contract with him, "We'll distribute your book," and he signs the agreement with them, and they throw his book in the vault; the distribution requirements were so onerous that no one qualified to get the book. So, there were a few copies around, and for about fifteen years, if you want to find out how UNIX really works, the internals, you'd have to get a second, or fifth, or tenth generation photocopy of this "Lions' Commentary," and that tells you everything you need to know about how everything works. We used to have tons of customers come in the store asking for the Lions' book, and we're like, "It doesn't exist. It's not a published book. No one can get it."

Anyway, John Lions was dying, and a group of UNIX folks, including Dennis Ritchie and Peter Salus, persuaded the powers that be that the code was obsolete and it wasn't going to harm anyone's trade secrets, etc.. So, they released the code in the book, and no publisher wanted it, and we said, "Yes, we'll gladly publish it. We know there's a lot of interest still." The reason I mention that is one, because it was a really feel-good kind of a thing, and we've sold fifteen thousand copies of the book over the years...

Spicer: Oh my gosh.

Doernberg: for this obsolete code that doesn't run on anything.

Spicer: That's amazing.

Doernberg: It's obsolete code that no one uses for anything anymore.

Spicer: And it's not exactly a light read either.

Doernberg: It's not a light read, but it's Turing Award winning code...

Spicer: Yeah.

Doernberg: Many people say that UNIX is the most beautiful code ever written. So, anyway, the reason I mention that is because it was a nice story, that book is still in print, and in a couple months, they're doing a twenty-fifth commemoration of our edition.

Spicer: Oh great.

³⁴ [Doernberg's note] I am not sure about them personally explaining it to him; I went back to check and at least one source said he had read over the source code before his Sabbatical.

Doernberg: Kernighan, Butler Lampson from Xerox PARC, and Andy Tanenbaum from Minix, and this international group of folks are going to commemorate the twenty-fifth anniversary of our publication of the book coming up. So the book is still really influential, really important, but the basic idea of that book was that “here's the code, here's the explanation / note that's relevant to it.”

From about 2007 to 2018, I was actually working on software called [NowComment](#) that basically takes the idea of the Lions' book and expresses it in software. It's very similar to Google Docs³⁵. I no longer own the software, I passed it on to someone else, and it's used in education all over the world. So most of my time, a really good chunk has been spent either with that Lions' book or software that arose out of it.

Spicer: Wow, that's fantastic.

Doernberg: And then in my spare time, I do public relations work as a volunteer for local activist groups, anti-racism, stuff like that.

Spicer: No, that's great. The Lions' book, is that still being used for classes, for instruction? Do you know if...?

Doernberg: It is.

Spicer: Any universities are still ordering?

Doernberg: There's one that you may know of.

Spicer: Stanford?

Doernberg: MIT.

Spicer: MIT?

Doernberg: MIT has this thing called OpenCourseWare.

Spicer: Oh, yes, yes.

Doernberg: Anyone in the world who wants to can take these courses.

Spicer: Yeah.

³⁵ [Doernberg's note] The UI is visually similar to Google Docs, but the functionality is pretty different. NowComment is geared toward optimizing the ease and power of commenting and discussion, with some editing capabilities, whereas Google Docs is geared toward editing and has minimal features for commenting. NowComment can gracefully handle thousands of comments per document and has many unique features. It's been a reliable educational platform for almost a decade, used at no cost by thousands of schools worldwide (it was designed for Higher Ed but is now also used in some elementary schools and tons of middle and high schools), I'm very proud of it!

Doernberg: So, if you take the MIT OpenCourseWare operating system course, they have a textbook, but they also say, in conjunction with the textbook... well, they used to use Lions as the textbook for that for many, many, many years. They have another textbook now, but they still say, "You should also buy the 'Lions' Commentary' because nothing's better." I talked to the chair of the computer science department at the University of New South Wales two days ago ... Lions wrote that code³⁶ in '77. It's twenty-five years since we published the book, but it was suppressed for almost twenty years. So, it's forty-five years that this code that no longer runs on anything and MIT is still saying to the hot shot programmers of the world, "If you really want to understand the operating system, [read] 'Lions' Commentary.'" I mean, that's incredible.

Spicer: Yeah, for sure. It kind of reminds me of "Leaves of Grass." It was banned for-- unobtainable for the first twenty years, and then-- anyway sorry. That's an obscure reference.

Doernberg: Rachel, is "Leaves of Grass," number two on the author cards?

Unkefer: Oh Walt Whitman, he was number two.

Spicer: Oh wow.

Unkefer: He was the two. We have Author Cards, a deck of cards where each card number had an author, and each suit was a different book of that author.

Spicer: That's fun. How nice.

Unkefer: Walt Whitman was two.

Doernberg: Yeah.

Spicer: Who was one?

Doernberg: Ooh.

Unkefer: Ace might have been Hemingway.

Spicer: Okay.

Unkefer: He was either the ace or the king. It was mostly men.

Doernberg: Rachel has an amazing memory also, and I do not, not at all.

Spicer: Well, speaking of memories, thank you both so much for sharing yours today, and it's been a wonderful interview. I really appreciate all the time. It's almost three hours. So, that's a good healthy interview.

³⁶ [Doernberg's note] I mis-spoke here; John wrote the annotations, but the code is not his.

Doernberg: Well, thank you so much for inviting us to do it. The last time I was in Silicon Valley, I had a nice long visit to the Computer History Museum. It's a wonderful facility.

Spicer: Oh, thank you.

Doernberg: Best of luck in every possible way, and I hope you guys reopen soon, and we'll come back out and visit.

Spicer: That would be great. I'd personally love to show you around and have a tea or a coffee with you.

Doernberg: Well, I remember when the Computer History Museum, when we were out there with the company, we were one of the corporate sponsors for the Computer Bowl.

Spicer: Right, I remember, yeah.

Doernberg: So, we have the Computer History Museum is in our living room. So, we look at it daily, yeah, the trading cards.

Unkefer: The uncut baseball cards. The uncut baseball card sheet.

Doernberg: Yeah.

Spicer: Right, right. I remember those.

Unkefer: Have one of those hanging up, yeah.

Doernberg: Yeah so, we've got Bill Gates's autograph, his picture. He's a pitcher. He's in his wind up.

Spicer: Right.

Doernberg: And we've got his autograph, and we've got some other--

Unkefer: But better than that--

Doernberg: Famous folks.

Unkefer: He has our autograph. He has our autograph on his copies.

Spicer: Wow, so you got them signed. That's impressive.

Unkefer: Oh yeah. We had... there were I think ten or fifteen signed uncut sheets, and the numbering, for some unknown reason, was done by Todd Rundgren.

Spicer: That's a weird little detail.

Unkefer: He did the numbering.

Spicer: <laughs>

Doernberg: Yeah.

Unkefer: It was because our marketing guy was friends with him. So, we have all the autographs of everybody that was on there.

Doernberg: Yeah, we should give a shout out to Vince Emery was the marketing guy who arranged that with Todd and us.

Unkefer: He was the one I think who had... I think he was the one who came up with the idea for the trading cards.

Doernberg: Can I just add one last little story, just as a...?

Spicer: Yes, please do.

Doernberg: Just a shout-out to Vince.

Spicer: Yeah, yeah.

Doernberg: So, Vince... one of the things we wanted the store to always be was fun, and somebody somewhere came across an advertisement for a cassette. It was published in San Francisco. It was called the "World's Funniest Computer Songs," and it was a cassette tape, which I have a copy somewhere, ... "I'm a Sergeant Major" from "Pirates of Penzance" or something like that, [became] "I'm Data General³⁷," stuff like that. I inquired about it, and Vince sent me a sample copy, and I thought it was really funny, and I said, "I could see us doing really big things with this in the store. Can I order five hundred or a thou--" I don't remember, something. "And if we promote it in our newsletter, will you give our store a six month exclusive on retail sales?"

Spicer: Oh yeah.

Doernberg: And of course, he was probably thinking... this is a word of mouth, this is a fun little project, and I said, "Well, we'll promote it all over the world," and he went in for that. We promoted it. We sold a thousand, or I don't know how many we sold of that. It was really a fun little project, and then he became our Marketing Manager from that... that was just one of the little deals that I used to work

Spicer: Yeah.

Doernberg: And "Rich's Guide to Silicon Valley," he³⁸ gave us the map. We sold tons of his book, and then he did the map for all of our marketing stuff, and he just let us use the maps for free... here's how to get to the stores. So it was all these relationships over the years that were really meaningful.

³⁷ [Doernberg's note] "I Am the Very Model of a Modern Major-General" became "I Built a Better Model than the One at Data General."

³⁸ [Doernberg's note] Rich Schmieder

Spicer: That's wonderful. Yeah. Well, thank you both again, and--

Unkefer: Yeah.

Spicer: And we'll send this out to you both for your review and comment.

Doernberg: Oh, yeah, I will apologize in advance for being long-winded and--

Spicer: No, you weren't--

Doernberg: Thanks again-- thanks again so much for doing this.

Spicer: You were not long-winded. Both of you were perfect. Thank you so much and thanks for taking time out of your Friday.

Unkefer: You're welcome.

Spicer: Have a great weekend.

Unkefer: You too.

Doernberg: You do the same.

Spicer: Okay.

END OF THE INTERVIEW