

An Interview with

MARY SHUTT

OH 508

Conducted by Thomas J. Misa

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## Mary Shutt Interview

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### Abstract

Mary Shutt graduated from Purdue University in 1980 with a degree in industrial engineering, finding it a supportive educational environment. After interviewing with a number of companies, she landed a job offer with Sperry Univac in the Twin Cities. Her first responsibilities were material-based planning and manpower projections, working initially at Univac's Shepard Road factory site. She became a specialist with Univac's MAPPER software, suitably modified to calculate real-time "what-if" scenarios that were useful in proposal preparation and planning (for example) for the UYK-43 and UYK-44 programs. Subsequently, she worked with industrial automation and factory design, then moved into proposal development, project management, and contracts. A major effort was the Joint Direct Attack Munitions (JDAM). When Lockheed Martin's Eagan facility closed, she moved to PDA which continued work for the U.S. Navy. She remarks on changes she observed in corporate culture with the Unisys merger and Lockheed Martin management.

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Misa: My name is Tom Misa [and] it's the 6th of November, 2015. I'm here today with Mary Shutt at the Charles Babbage Institute. We're doing interviews for the Sloan Foundation, looking at the perspectives and careers of women who were working in the computer industry during the 1960s to the 1980s. And, Mary, you mentioned before that you entered the industry in the 1980s so we can focus there. I'd like to start with a bit of background on your childhood and growing up. Do you recall as a child, before going to high school even, or for sure before going to college, having any special hobbies or interests or things that you were particularly interested or keen on that may relate to a technical career?

Shutt: My father was a surgeon, my mother was a chemist.

Misa: Okay, great.

Shutt: My mother graduated; went to Northwestern; my parents met at Northwestern University. And my mother was a chemist in 1948, so I had that background. I'm one of nine children. I'm the only one who went into engineering. One of my brothers actually went into chemistry and ended up doing computer science stuff. I got the math and science gene and didn't get the English and writing gene. I don't know that I was ever really interested in technical stuff. I was good with mechanical things, but taking it for my future and what I went into, because I was good at science and math, people would say maybe you should be an engineer. I had no idea what an engineer was but it sounded good, and I actually took one of the placement tests, probably one of the SATs. [I] did

very well in math and science, and was illiterate. So I retook the test so I could get into college and I would always pretend that I wanted to go into engineering. Well, the second time I took it, I put down Stanford, M.I.T., and Purdue as where you want your test scores sent to. Well, I get a letter from Purdue saying if you apply you'll be accepted. So that's how I ended up at Purdue. Honestly, I went into industrial engineering because it was the least technical of the engineering curriculums. I thought if I like what I'm doing I can move into one of the specialty engineering [areas], you know, electrical or mechanical, and if I didn't like it, Purdue had an industrial management program. So I could move. My picking industrial engineering was kind of a default, just like eh, [laughs] it's a good starting point and I can move from there, and I just stayed with it. So that's how I ended up as an industrial engineer was really just my basic aptitudes in math and science.

Misa: When you were growing up, do you have a sense that your mom was doing some kind of interesting and distinctive work as a chemist?

Shutt: No, I was one of nine children, and she worked for Rite Dye, doing dye lot stuff before my first sister was born, because that was in 1950, and then she was a stay at home mom for the rest of the time, but always was very — we always laughed that my dad could only use tools of surgical steel and my mother got the rest of them. [Laughter.] Mom was very handy at everything. So she didn't use her chemistry background. She used it to line up all the dark socks on the back of the couch to match them up; she put them in color order.

Misa: So she had a scientific temperament, you might say.

Shutt: Yes, very scientific temperament.

Misa: Were there any other teachers in high school or other parts of your high school community that encouraged your interest in math and science?

Shutt: Well, all of them, pretty much, because those were the areas I excelled in so I typically felt good when in those classes. I took an architectural — now when you brought it up, I hadn't even thought about it — I took an architectural drawing class my junior year of high school and at that point I thought I wanted to be an architect. We started out with you had to sketch out a house at the beginning of the year and then that was your project for the whole year. And by the end of that year I no longer wanted to be an architect because it was too tedious and there was something that I stuck in the design in September that I was still having to deal with the next May and I hated it because all the drawings had to match and everything. And again, that was the days of big drafting boards and T-squares, but then the next year, the same teacher taught a mechanical engineering class, or mechanical drawing I think they called it. And that was a lot more fun because you did a drawing and it was done, and you got to start on a new one. So probably, yes, and I can picture the guy — Mr. Zimmerman — I hadn't thought about him for years and years.

Misa: And where was high school?

Shutt: I went outside of Chicago; I went to a Catholic high school, Benet Academy.

Misa: Benet Academy.

Shutt: And it's in a suburb of Chicago.

Misa: Which suburb, do you recall?

Shutt: I'm from Naperville, [IL].

Misa: Naperville, so one of the western suburbs there. And in high school, besides the mechanical drawing, were there other clubs or activities or things like that, that people with a technical interest might've found peers or friends or activities with?

Shutt: Not that I recall but there probably were some. I was into more social things. So there may have been but I don't recall. Anyhow, I'm sure there were; I'm sure there was like a math club or something like that.

Misa: And so from your family background it sounds like your parents were both educated and they had an assumption; you said you came from a pretty large family. Did your other brothers and sisters also go to college?

Shutt: All. It was a given. All nine of us went to college. Every undergrad degree was paid for. I'm thinking more than half of us got master's [degrees]. I have a sister who went back got her M.D. degree. So, yes, we're a very highly educated group. When we first started out and we were all young together [laughs].

Misa: But you had a supportive family network.

Shutt: Yes, very, very supportive.

Misa: One of the things not everybody does [have] and you were lucky to have that.

Shutt: Yes. I told you how I ended up at Purdue because they said they would accept me. I can remember my dad, my senior year saying — because I wasn't quite getting on to the application stuff — he said we will pay for you to go to school, but you will go to school. [Laughs.] This was not an option; it was not acceptable that I was [not] finding the time to fill out college applications. So, yes, that was definitely supported and expected.

Misa: Can you say how you felt moving from Naperville to Purdue? What kind of campus environment was it; do you recall what it was like? It would be the late 1970s, I think.

Shutt: 1976 I started college. It was a lot of fun. Actually, my first semester, they were crowded and there weren't rooms in the dorms so there were about 100 of us who lived in a motel about a mile off campus. There was bus service and everything, so my first semester was off campus, and then I moved into a dorm, and then I lived in a sorority house. You know, it was the first time in your life that, I think, I had — I was not a good student to start with, how's that? I enjoyed the freedom that college offered, and then I turned it around and I did graduate in four years. But I had a lot of fun in school.

Misa: Were there any professors, topics, and students that you made memorable connections with at Purdue? Any of your teachers?

Shutt: There's some that stick out for various reasons. There was a Professor Barone who did — I was in industrial engineering — who was just this big, looming figure. And I don't remember anything specific about him other than he was a, I'm sure, had some influence on me but I don't remember anything specific. There was Professor Green, who I remember from the end of my time there, when there was the hostages in Iran. And there was lots of spray painting and stuff, you know, "Ban the Shah" was being spray painted around campus, and this professor kind of suggested to some of the Iranian students that they should be more respectful of our campus. It was kind of scary. I remember the environment more than any of the specific instructors. Briston Hall was where the industrial engineering topic classes were and it was a very comfortable place. I think they had a lounge area there, but I just remember spending a lot of time in there. I don't remember all lot of the specific instructors.



Misa: Can you remember about the proportion of women who were in industrial engineering?

Shutt: It was probably five to 10 percent.

Misa: Five to 10 percent.

Shutt: Of the total.

Misa: That'd be a pretty typical number for engineering at the time, I think, so that's one in 10 or something like that.

Shutt: Yes.

Misa: So most of your classmates would be male students. Were any of your instructors female?

Shutt: Hmm. Not that I recall. I don't recall any in engineering, itself. There were probably, I'm guessing, in some of the math classes there were, but in the industrial engineering curriculum and the engineering classes, I cannot recall any females. Sitting in lecture halls and things; I don't recall any females.

Misa: It's actually still a challenge today to have enough, but at that point in time at Purdue, I was just wondering.

Shutt: I hadn't even thought about that. I'm guessing for some of the math classes there probably were, and some of the elective courses, but my recollection is pretty much all male.

Misa: Were there any networks of female students on campus? A student group, or some other informal study group, or something like that?

Shutt: There was the Society of Women Engineers and they were very active there; SWE. They had a lot of academic support but they also did a lot of social things. Purdue used to have, it was called the Grand Prix and it was a go-cart race. And SWE would always have a car in the go-cart race. So yes, there were; that's the one I remember.

Misa: Were you involved with SWE?

Shutt: Occasionally if they were doing something fun, but I was not an active member.

Misa: Anything else that you'd like to [share] about Purdue at the time? Big successful engineering school, so you were at a notable place.

Shutt: It was good place to be, you know, I had a good four years there. While there weren't a lot of women in my classes, I never felt that I was trying to fight anything, being a woman there.

Misa: So your experience was actually pretty positive.

Shutt: My experience was extremely positive.

Misa: Some people make the comment today — I'm not saying this is your comment at all — but some women going into technical fields don't feel that they have the same kind of support, or that they're made to feel oddballs or something like that. It's hard to pin down because it's a sensitive topic. But it sounds like your time at Purdue, on the whole, was positive and that you felt supported and respected by the other students and professors, even though the number of women by proportion was pretty low. You said about five to 10 percent.

Shutt: Yes, absolutely, and I do, I felt it was a very supportive environment.

Misa: As I recall from undergraduate days, people starting maybe in their third year but absolutely by their fourth year, they're considering what to do next, whether that's finding a job, or going to graduate school, or taking some time off, or doing something different. What ideas were floating around for you?

Shutt: When I graduated in the spring of 1980, the economy really had taken a dive right at that time, so we were really a year or two before jobs were abundant. There were fewer opportunities out there, but I had industrial engineering so I was out interviewing. In industrial engineering, in the curriculum, we did simulations and we did operations management, and we did a lot of different things. And every job I went to interview for was doing time studies.

Misa: Time studies, okay. [Laughs.]

Shutt: With a stop watch. I interviewed with the Post Office, I interviewed with Frito-Lay, I interviewed with General Dynamics, and I can remember — like vivid memories — thinking I can't do this for the rest of my life. That was one class in the entire — you took a three-hour class on time motion management, or something, and that's what the job offers were. I was just dumbfounded and scared. I was scared because it was like, I don't want to do that! I really recall thinking what am I going to do? Just by chance, I was actually heading out to an interview — I flew from Lafayette up to Chicago and was going out someplace on an interview — and there was a job fair in one of the hotels right near the airport. I had a layover so I went over to see this job fair and just by chance, there was a woman named Midge Rothrock, and I remember her very well. She was at — it was Sperry Univac at the time — she was at the booth and I had my one page double spaced resume. [Double spaced] to fill up because I had nothing to put on it. She was at this booth and I was handing out my resumes, and she said oh, I was just talking to Wyman — Wyman Short's this guy's name — I was just talking to Wyman and he said

he needs another industrial engineer. And so she handed me an application and at the top she wrote “Route to Wyman” and handed me this application.

Misa: That’s pretty promising. Excellent.

Shutt: I filled it in and I got a call and they asked me to come up and interview. Actually, at that point, the Mary Tyler Moore Show was real big and so it was like, I’ll go up there [Minnesota]. So literally, I got a job offer from Sperry to be an industrial engineer. They had an internal placement program within the company, and they talked about it. And they would pay for further education and they had an internal placement program so you had to stay in your job for [a] year and then you could apply for other jobs. And so that’s why I came up here, because the job was doing time studies but I knew I only had to do it for a year and then I could move into something else. Oh, I ended up contacting a placement guy, who is a headhunter who had been calling me down in Chicago. I called him up and I said here’s the job, here’s the offer, can you find me the same thing in Chicago, down in this area? Because I wanted to stay home. I wanted to be in Naperville, well, in that area. He called me back a week or so later and said you know, I’ve looked around, you’ve got a great offer, he said go up there, get a year or two experience under your belt and come back and you’ll have a golden ticket. And so it’s like, okay.

Misa: Sperry people are thinking the same thing, too.

Shutt: So I accepted the offer, moved up here [Twin Cities], and as luck would have it, there was somebody who was in the industrial engineering department who did resources and manpower planning for the factory, who had just about the time I had started, he was leaving. So I never had to do time studies; I got his job. So I did material-based planning and manpower projections, and it was very much involved in computing and that. So I ended up supporting the time study stuff; so I was in the industrial engineering department but I was doing the other kind of stuff, the operations management kind of stuff that I had studied.

Misa: Where was it that your first job was located?

Shutt: It was at Shepard Road, which the Shepard Road facility was at the corner of Shepard Road and Highway 5 [Saint Paul, Minnesota]. The building's no longer there.

Misa: It was knocked down about a year and a half ago.

Shutt: Yes, US Bank had it for a while, right behind Bucca [restaurant], there. So I started out there in the industrial engineering department, and that's where we had a full factory there that did printed circuit card assembly. They did core stringing. We had a PC fab shop that made the fab boards so we played with the copper and everything. After a couple of years in the mid-1980s, we started making ceramic circuits, where you would start with a ceramic substrate and they silk screened the circuitry onto them. So rather than taking a copper etching and doing stuff to it, you were actually just like silk

screening a t-shirt but it was silk screening the circuitry onto [it]; kind of the early version of the 3D printers. [Laughs.] Just kind of printing, building up that; so yes, I started over at Shepard Road doing that and what I would do is I took our orders forecast, and how many orders, what we had to build, and we kept it between what our firm orders were and our forecast orders. And then we would take, both from material planning and labor planning, take the labor hours it took to make each box and multiply by all the factors that get applied. So I would come up with this sheet that said we need 500 people working, and then all of a sudden our forecast dropped off and said we'd only need 400. So based on my reports, you could tell if there was going to be layoffs coming or not.

Misa: Okay. You could sort of see that.

Shutt: Yes. Once we figured out that's what it was, it wasn't so much fun, but those were exciting times. Our division won a couple of big contracts at that point to the next evolution of the Navy computer. We built a lot of mostly stuff for the Navy.

Misa: Commercial stuff I understand was in Roseville and military things were . . .

Shutt: Yes, we were defense. And we had won — UYK was the government acronym for like “U” was Universal, and “Y” was something, and “K” is computing and then it was a dash-43 and a dash-44. There were big competitions, and we won the competition for both of those. And with that we built some facilities out in Colorado. But when I first started in 1985 [pause]

Misa: Can I ask you to zero in on this work; how all these computations were done and how these projections were computed?

Shutt: Yes. I started out with a, I think they called them Uniscopes. They were big, you know, almost like a big DTV. And we had a keyboard with them, but everything was done on a mainframe computer, so with the computations and the reports that I was running and the projections I was making, it did one run overnight. So I could put data in and then it would; as I say, I made a report and I would get the report the next morning. It would get delivered in a computer printout thing and I don't remember how big those were; 14x17 or something.

Misa: Fifteen inch, or the fan fold printing.

Shutt: Yes, those big things. And you could do one a day.

Misa: One a day, okay.

Shutt: Yes. Soon after I started there was a report; it was called MAPPER.

Misa: Oh yes, the famous MAPPER.

Shutt: Yes, I was MAPPER Mary; they called me MAPPER Mary from Naperville



[laughter] because I ended up doing MAPPER run design. MAPPER was really just a, almost like a big Access file. It was a report generator but it had a lot of capabilities. Actually one of the IT guys did a MAPPER — [they were] called MAPPER runs, they weren't even called programs, it was called run design. He wrote a MAPPER run to do all the stuff that was happening on the mainframe, but do it on MAPPER. So once that got [up], and probably in the first six months to a year that I was working — I worked a lot with this guy, his name was Dick Weber. I worked with him a lot and he was trying to develop a MAPPER program that could do the same thing that the mainframe was doing overnight. So he would run his thing and then he'd have me compare it, and so other stuff; and soon I ended up getting rid of the mainframe thing and using the MAPPER program.

Misa: What kind of a computer did MAPPER run on? It wasn't running on the company mainframe?

Shutt: It probably was running on the mainframe but it wasn't an overnight process to run it. The other thing was probably like a standalone program that was — I don't even know what — but we used to do batch processing so it must have been something that was batch processed. Whereas MAPPER was on the company — I know it was on the company mainframe and I'll tell you why in a minute — it was on the company mainframe but it was real time. It was a real time report versus a batch process. So within, like I said, the first six months to a year that I was working, we switched from the batch process to the MAPPER version of this so I could do all kinds of what-if studies.

And this is the time when we were bidding a lot of new programs, so they would have me [do] what-if we win this and lose this? Or get 50 percent of this? Or, you know, I did what-ifs all the time.

Misa: If you had to do that overnight it would take three weeks or something.

Shutt: Yes. And Wyman Short was a wonderful man. He was the manager, and then I had a supervisor who I worked for, Harold Huss.

Misa: That's Wyman with a 'W'?

Shutt: W-Y-M-A-N. And Wyman was a great guy but both he and Harold were very old school and it bothered them tremendously if; so he had the planning people and the people who worked for the vice president of manufacturing who wanted to see — because we're bidding all this stuff — so they're very dynamic and wanted to see how, if we win these two programs, what's going to happen. So they keep coming and asking me to do the; the one guy specifically, Gordy Erickson, was a wonderful friend and mentor. But Gordy would come down and say what if this, and what if we get this? So Gordy would have me do all these reports and I'd do them and give them to him. I started out saying I need to show them to Harold. He'd say Harold takes too long, just give them to me. What they ended up eventually doing is taking myself and the job I was doing and moving me into a different department, so I didn't have the conflict of not telling, of not running everything through these guys.

Misa: At some point, what you're doing is less industrial engineering and more planning, and looking out, and looking forward rather than trying to figure out what the work force requirements over a couple months would be. You really talked about kind of company-wide.

Shutt: Yes. And so Gordy took me under his wing and took myself and the job that I was doing and moved me into a different organization. Again, sign of a forward planning organization, but there was one specific instance where I did one of these what-if things. He wanted it and I gave him a report and I went back looked at it and said something didn't look right. In one file I had something with a dash between two things and the other file I had a space, so it hadn't linked, they hadn't matched; so the report I gave him was wrong and said we needed way fewer people than we did. I'm 23 years old, and panicked. Oh my gosh! I gave him this thing. So I fixed it, got it the right way, had the right report and I brought it to him, and I said, the thing I gave you before was wrong and here's the new one. He looked at me and he said — Dick Seaberg was our general manager — he said Dick Seaberg's over there, he said, and he's got your report in his front pocket, and you've gotta go change it. [Laughs.] [Then] he said no, I'm kidding you.

Misa: Because Dick would've been a very senior person.

Shutt: Oh, very. *THE* most senior. So anyway, that I remember. But again, life lesson, check stuff before you hand it over. Don't get so excited about doing . . .

Misa: Fast turnaround.

Shutt: . . . getting stuff that you don't make sure things match.

Misa: You said that you have an anecdote that proves MAPPER was running as a real time application on the mainframe.

Shutt: So after a while, I started doing some MAPPER run design to make tweaks to things, and make do; and I screwed something up and brought the mainframe down with my little MAPPER run. I got a call from the computer center saying we're shutting off whatever it is you're doing. [Laughs.] And in the future — and I think they had a test system — and it was like until you've tested something out on the test system, don't put it on the mainframe. But yes, so whatever there was — I can't remember what I was doing — but something I did had an infinite DO-loop that brought down the mainframe.

Misa: That just got it stopped.

Shutt: Just kept on. [Laughs.]

Misa: With the earlier planning that was overnight, but with MAPPER how quickly could you get a run back?

Shutt: Instantly.

Misa: Instantly.

Shutt: Yes, just within; you know like you do something in Excel now.

Misa: Seconds, then. Not even minutes, seconds.

Shutt: Yes. So I did that for a couple of years where we did different planning scenarios and worked with a whole lot of factors that get added on.

Misa: You described Gordy as a mentor to you.

Shutt: Yes. He was from the very beginning, when I was doing these what-if things, he would come down and ask for stuff but then help me get through it. And then he had my job moved into like a planning organization. I was probably in there for a year or two and he had a number of, I don't know what; it wasn't factory operations. He had planning, and there was some programming, some factory support kind of organizations. So after I had been in this planning job for a couple of years he said you know what? I think you should go down and get involved in some of the manufacturing systems I think we called

it; you should get involved in some of the systems kind of work. So I had an interview with the manager of that systems department, who had no choice because his boss had said I should interview for it. And that's when I ended up doing the MAPPER run design for it. We did some automated; like the substrate silk screen that I talked about, that was probably in 1983, and we ended up — because that had to be a clean room environment — we ended up generating paperless processes for that. So the operators, when they were building, normally when we did a manufacturing job, you'd have a stack of papers that would go with it. The work was in a big tote and then with it was a job packet that would tell you step by step all the things that had to get done [such as] connect these things and do that.

Misa: So you'd have a tray or something like that, that would be kind of a work package, work unit, or something.

Shutt: Yes, and with a paper set of instructions with it. When we started doing the ceramic substrates, silk screening the circuitry onto ceramic, it had to be a clean room environment so we couldn't have paper instructions for the operators. So back in 1983 we developed paperless processes where we made them electronic and put them up on-screen. At each of the workstations there was a screen.

Misa: Like we'd have a monitor today.

Shutt: Yes, like a monitor.

Misa: That would be the paper, then, so you wouldn't have the problem with contamination and the paper being somewhat dirty, or bringing fibers, or something like that.

Shutt: We were also trying to some things with manufacturing automation, where we were trying to do first in/first out, to the jobs because what we had then was the operators in the factory had things they liked working on. So we weren't doing first in/first out, we were doing whatever the people liked working on would get done first. So we implemented — and then it was promptly taken out — a bar code identification system, where all the jobs would be bar coded so when operator Susie sitting at the first desk needed another job, it said okay, she can do these kinds of jobs and it would send her the next one in the queue that needed to get done. It was supposed to get the work flow going. Well, the operators all kind of sabotaged it. Not physically sabotaging, but they would bring the tote back up and say I can't work on this, and I don't know how to do this.

Misa: So you're getting a little pushback.

Shutt: Pushback to the point that these conveyors sat out there on the assembly floor for a while and they just finally took them away.

Misa: It was conveyor driven . . .

Shutt: It was conveyor driven.

Misa: . . . so it's almost like a kind of an assembly line but for this assembly work then that the individual operators would be doing.

Shutt: Yes. It was to route the jobs according to the next thing that should be worked on, because we would end up that there would [be] dozens and dozens of jobs in the queue waiting to get worked on so the plan was to try to work the next one, first in/first out, work the next one in sequential order not the next one the operator wanted to work on. The group that I was in was manufacturing automation.

Misa: Can you describe the working environment with the group; how many people it was?

Shutt: The group I specifically worked with was probably a half a dozen of us. I was the only woman. It was not much bigger than this. We each had kind of a corner desk like you've got there, and all of our backs faced the middle. But it was kind of a bullpen area, so a lot of collaboration and people kind of had their specialties in what things they were working on. It worked very well because there were people there who could help or answer questions, or help you work through something. It was a very friendly; the whole place was. They had bumper stickers that said "Sperry — it's a great place to work." And it really was.



Misa: It was, yes.

Shutt: The environment there was a lot of fun. There was a lot of camaraderie, a lot of baseball teams, softball teams, and go hop on buses and — and not as part of but from work — a group of us would go to there's a bar right down, the Rand, from Remington. The bar at the corner was the Rand and we would go to the Rand on opening day of Twins and go take a bus over to Met stadium to watch a baseball game. So there was a lot of camaraderie within that organization; this was at the factory.

Misa: Do you have any sort of idea how that came about? Reflecting back, were there bosses or supervisors that helped facilitate that, or was it something that just organically developed?

Shutt: It was certainly there before I was there. I think it was just kind of organic. This is getting into organizational stuff but we certainly felt the difference when we were no longer Sperry, when Burroughs bought us — with our own money [laughs] — in the mid-1980s.

Misa: 1985-1986, I think.

Shutt: When Burroughs bought Sperry with money that Sperry had in the bank, and they changed the name to Unisys.

Misa: The, quote, merger of the two.

Shutt: The merger, yes, and it was not a merger. Michael Blumenthal raided our pension fund. Our pensions got; he sucked it all out.

Misa: So there was a distinct change in working culture, then, after 1986?

Shutt: The culture here in Minnesota stayed the same, and I think is probably what ultimately lead to our demise because the people who started here, who grew up here, who worked here had great work ethic, very productive. Our manufacturing systems, our systems in general, our business systems that we had at Sperry were way ahead of what the industry was. That was a few years later, closer to the late 1980s, we hired consultants to come in and look at our systems. They happened to be from Arthur Andersen at the time, and they recommended that we get a new manufacturing resource planning system. It was their system, of course. It was called MACPAC/D. So a group of us hopped on a plane and flew down to their facility in Chicago so they could give us a demonstration. The system that we had in place was exponentially ahead of what they were planning on doing. It was a homegrown system from here that people had developed, but the thing was the tools that we had were very good. I think that the Sperry group here was — all of the IT systems — were well ahead of their time, in terms of that they were very; nobody ever packaged them up to sell them which is, and now [pause]

Misa: Very unfortunate, really, because if it was a super useful tool for the company, it could've been a super useful tool for somebody else. And if Arthur Andersen was selling something else, there was a market for this something else.

Shutt: Yes. And they didn't — and again, theirs didn't even exist yet — so that was kind of funny when that happened.

Misa: What were the components, what were the things that you thought that the Sperry system was quite superior?

Shutt: Well during the time I was there we replaced our purchasing system with a thing called T1100. Because we had engineering and manufacturing, the systems that we had talked to each other. So when the engineers designed something — there was a lot of complications and I never understood them all — but a lot of steps in the system; but the engineering bill of material would feed the manufacturing bill of material, which would feed what the factory needed to order. But they had enough control that went in, you know, when a rev change was made at one, it could be properly integrated, like time phased in. You knew what rev you were building to. So there were just a lot of integral things that in subsequent things that I've worked on, when those aren't there it causes a problem. So you think back, you go hey, we were doing that, we had that information way back, why don't you have that here? So as over the years, different companies, and we switched tools and it's like, I know back when I was working in the factory we had that ability.

Misa: Yes. So you think this is nothing new.

Shutt: Yes. The benefit was that it was all very integrated, and keeping in mind that our function was going from design to shipping out a hardware product, and we did everything in between and you had to have revision control through all of it. And you had to have CM control. You had to know what you were doing. But every time an engineer made a change you didn't want it automatically to ripple through to the manufacturing because they might've already been building something. So those kind of things were all accounted for.

Misa: So you needed, for instance — if I understand it right — if there's an engineering change you need to, in essence, make the change but then also make a management decision subsequent about when you're going to implement that change on the factory line.

Shutt: Yes, exactly. Effectivity date, is what they would call that; when the effectivity should be of that change. So many things had been built into the systems and things, as we made changes over time, the tools that replaced them didn't have some of those same capabilities. And they probably had other capabilities that were better, but Sperry was well ahead of its time and was very automated even in the early 1980s, and very progressive.

Misa: Did you stay working at the Shepard Road facility?

Shutt: I worked at Shepard Road until 1984, and I went and talked to my good friend Gordy one day, and I was doing manufacturing automation, it was okay [pause]

Misa: 1984.

Shutt: The summer of 1984, and my oldest sister is in the Navy and she was stationed in Italy; my youngest sister had studied that summer abroad in Europe and she was going to take the summer off and travel. I'm thinking I've been working for a few several years, I've got some money saved up. So I was talking to Vera, you know, I'm kind of getting bored. I think I'm going to put my stuff in storage — I had a one bedroom apartment — I said I think I'm going to put my stuff in storage and go travel around Europe for the summer and figure out what I wanna do.

Misa: This is way beyond regular vacation.

Shutt: Yes, I don't know if I want to be doing MAPPER run design for the rest of my life. I wasn't complaining, it was just like I got two of my sisters; I got one who's traveling around, who hasn't worked a day in her life, and the other's living in Italy so we got a place to stay, and so I think I'm going to go over and travel with her. Just something that would be fun to do. And within a week there was a job posting on my desk for an industrial engineer with three years of experience, and manufacturing automation . . .

Misa: As though it was aimed for you. [Laughs.]

Shutt: . . . it absolutely was. We had one of these big programs that I had been talking about bidding the UYK-43 and 44, that I was doing all the what-if studies; we won both of those programs. The company was building a new factory out in Pueblo, Colorado. And along with that, we were building an automated material handling center. So I ended up interviewing and accepting this job — actually, our interview was at La Fonda over margaritas — [laughs] that's how you interviewed back in 1984. I accepted the job to be the hardware engineer, working on development of this material handling system.

Misa: Out in Colorado.

Shutt: Out in Colorado, but working here — well, and at that point, we didn't even know it was going to be in Colorado. Actually, there were plans for it to be right next to Shepard Road but then there was a political struggle — not even a struggle — I think Sperry tried to get some funding from the state to build this building, this automated material center. And I don't know if it was the mayor of St. Paul or whoever, but somebody made a comment that they didn't want kooks like us working. I mean, it was a very snide remark about Sperry and it might've been because the start of Ill Wind [procurement investigation 1986-89] might've happened. I'm not sure what the timing was there. But there was, between somebody in the state — so it must've been the

governor — made a derogatory remark about Sperry and so they said we're not building this in Minnesota.

Misa: So therefore, then it went out.

Shutt: While I was first working on it I was still in Minnesota, and I never moved. I ended up marrying the guy who hired me for the job, but years later. We worked together for years, so I always blame Gordy, it was like you got me the job and now [pause]  
[Laughter.]

Misa: So you didn't move to Colorado yourself.

Shutt: I traveled quite a bit out there; we managed the project from here. With that project we built this team and it was a very, very fun project. We built a material handling warehouse that had conveyors and storage retrieval machines that could store all the parts. It was completely automated so everything was bar coded, and in the building we had the warehouse in the middle with windows looking into it from the procurement; the procurement people sat upstairs and our offices were looking into it. I was [the only] female on the team at the time, so I went to the architectural meetings. The architect was from Omaha. So I'd go to the meetings with the architect. I was the only female on that team so they had me pick all the colors, all the furniture, it was just wild. I was in my mid-20s; it was a riot. I flew to Merchandise Mart and picked out some big chairs that ended up; that building in Colorado ended up getting closed. They moved these chairs

and couches that I had bought, and they were in the executive area back in Eagan for years.

Misa: From the Merchandise Mart in Chicago.

Shutt: I'd walk by and think I picked those, I ordered those. But I interfaced with the — we hired a company out of Salt Lake City, Eaton Kenway, who built all the storage retrieval machines. We wrote purchase orders for all of the storage totes, and all of the desks, and the chairs, and the printers. We were printing bar code on the little bar code printers that were horribly expensive and they used that thermal paper, so the bar code was expensive, the paper was expensive, and it would fade. So we ended up buying little inkjet printers — and even in those days they weren't more than about 100 bucks apiece — and every one of these operators' desks had an inkjet printer. Somebody wrote an algorithm to make the bar codes, so it would just go back; it would print the label stuff and have the bar code on it. So it was a fun project; that started in the summer of 1984. The total project was about \$20 million and I had about \$10-12 million of that as my budget. And again, I was part of a team.

Misa: A team of about how many people?

Shutt: About half a dozen of us. It was not a big team. Bob was program manager, Gene was project manager, Mark was software lead, I was the hardware lead. And then as time



grew, there was a guy who did the quality stuff. There probably ended up being a dozen to 15 of us; we were a pretty tight knit group.

Misa: It sounds like your title is hardware but you're doing a lot more than that.

Shutt: Yes, but everything pretty much touched hardware, though. I did a lot and had a lot of fun.

Misa: And your physical work there, did that stay in the Shepard Road facility or did at some time you move to the Eagan plant?

Shutt: I went to Eagan, and actually, we moved all around in Eagan. We had I don't know how many facilities at the time. We were at an office building in Eagan for a while, and then we moved to an office off of Lexington, some other older office buildings in Eagan, and then they moved us back to the main building in Eagan. So it was big, there probably had to have been a dozen different buildings people were in Eagan, for a while there.

Misa: A dozen. I had no idea it was so dispersed then.

Shutt: Yes. Shepard Road was called Plant One. The main building that just got torn down in Eagan, that was Plant Eight. We had a couple of buildings over on Federal Drive, which was just like two blocks from that. Then there was, they called it Corporate

Square, off of Lexington between Lone Oak and Yankee Doodle. There's Corporate B, C, and D plus a big warehouse area back there. We had those; some of these may have overlapped with each other. There was a place called Eagandale at the corner of 494 and Pilot Knob [Road], there is a five-story building there that we were in for a while, that was called UEC, and in that kind of big office park area there were a bunch of buildings back there that were referred to as Eagandale. So we moved a lot, and there were a lot of different buildings. It was massive for a while.

Misa: During those years was it a similar group? Were your coworkers more or less the same people and your work environment or work location got moved around?

Shutt: Yes. As long as I was on that team, manufacturing automation was kind of the overarching; and even when we built the material center, it was automation.

Misa: There must have been other projects that you worked on, beyond the Colorado project.

Shutt: Yes. In the middle of all that someplace, Bob — who is now my husband — asked me if I would go out on a date with him. I told him no and he started pouting. I asked what's wrong? And he said I thought we could go out for dinner. I said I'll go out for dinner with you, I just won't date you. Probably about a year of that I realized we were dating. [Laughs.] At some point it turned, so he asked me to marry him and I was still

working in his organization, but I then started applying for other jobs. And so when I got a job and moved into proposal management [pause]

Misa: Which is kind of like planning and that kind of facility.

Shutt: Bidding proposals. It's not my favorite. So when they offered me that job, then we announced to the group that we were getting married. People were dumbfounded because they didn't even know we were, you know, it was like; we went to my boss' house the night that I had gotten this job. I had told my boss at some point that I was interviewing for other jobs. This is while I had my engagement ring pinned to my pocket. And he said to me, Bob's moving up in this company and you should hang onto his coattails and move up with him. I'm sitting there thinking oh buddy, you have no idea. So when I got the other job, they called me with the offer, within Sperry, and I said let me tell my boss, please. They said okay, so Bob and I went over to his house that night with a bottle of champagne and Bob said we're here to celebrate Mary's new job. Gene was like — because he had argued with Bob that Bob should do something to get me to stay there — and then he said, and her engagement. Gene said to who? And I leaned over and kissed Bob. And Gene's wife was like we talked about both of you but never together.

[Laughter.] So I moved into proposal management and I did that for a year or so; and then I had the opportunity — this was, okay, we were in early 1990s — actually 1989, because my son was a baby. I've got four children. So I'd had our first son, and I got a job as executive assistant to the vice president of marketing. In those days, in the early 1990s, everybody had an executive assistant and it was kind of a token thing. Because

they were all women — everybody's executive assistant was a woman — so it was trying to get people to have a little bit more visibility, and the plan was that it was a non-rated, non-evaluated position and the thought was that you'd only stay there for a year or so and then you'd move on. But it's to give women, or whoever the executive assistant was, some [pause]

Misa: Visibility and then contact with lots of different groups.

Shutt: Visibility and also a learning experience both directions. So I did that, and from there I moved into — which was wonderful — into program management. The programs I was working in were looking at trying — at this point Shepard Road was still open so our manufacturing facility was still open — so what we were doing was we were focusing on trying to sell our manufacturing capabilities and do manufacturing for other companies. We'd been on a lot of stuff and we'd invested money in a lot of different directions; the big prize through the whole thing was a program called JDAM, which is Joint Direct Attack Munitions. It was after the first Gulf War and we had lots of bombs but they weren't smart. What this program did— and it was a competition, and we were on the McDonnell Douglas team that bid against the Lockheed Martin team, at that point we were Unisys, though, so we were a different company. Lockheed Martin was bidding against McDonnell Douglas, and McDonnell Douglas won this thing. We built the mission computer for these things so if you've got a 5,000-pound bomb, what this program did was put a tail kit on the bomb that had brains in it. So it had a gyro, and it had an actuator with tail fins so it could guide it in. So if you Google JDAM, they'll show

some test sites. If somebody wanted to blow up this corner of this building, they'd put in the coordinates of here. So it turned just regular bombs into smart . . .

Misa: Explosives into something that could be targeted.

Shutt: Yes, we refer to them as smart bombs. We won that through Donald Seleb, who got onto the McDonnell Douglas team; and then McDonnell Douglas competed against Lockheed and they won. It ended up being like one of the most profitable programs, in terms of most profit on sales. By the time we closed Eagan, we had sold over 250,000 of them. It was a fun, fun program because it was a collaborative team, but McDonnell Douglas was the prime contractor. It was Honeywell, and Unisys, and Rockwell Collins, and the company that did the tail, actually.

Misa: Those would be the subcontractors?

Shutt: Subcontractors, all to McDonnell Douglas, so we all had a piece of this pie. And they had a what you would refer to as an IT process team. At the vice president, the executive management level, they had this team that would meet together and that group of people told the employees from each of the teams, don't worry about how much of the pie you get because if we don't win this, nobody gets any pie. We sat down, this group, the McDonnell Douglas team, they had a brainstorming session, if you will, and had all of the subcontractors, everybody worked together for a couple of days — we actually were at the Honeywell location, here —

Misa: Here in town?

Shutt: Here in town. They actually broke us into two. So then the McDonnell Douglas team had all the suppliers show up, and then they broke us into two teams and said okay, your job is to come up with the least expensive solution that will meet this criteria. We cut out 80 percent of the cost of the thing. We were building this mission computer board, and then we had this goofy cable assembly so that we could plug all the connectors from everybody else into ours. We had been all of us sitting in one room and the Honeywell guys said you've got 32 connector pins that we have to connect to. The Honeywell guys said but most of that is for our internal testing, you really only need seven of them. So we were able to — and we did kind of the same thing with Collins — and we were able to get [pause]

Misa: Get a different group of people across different companies to sit down and say what do you really need?

Shutt: Yes, what do you really need? And we came up with a fantastic solution. We won the program and it was very successful. So I did that, so I was in program management, doing that manufacturing kind of stuff probably 1992 to 1997 or 1998. And then we had a woman who was director of contracts who would come in. I was working on that same program and she said have you ever thought about being in contracts? I said no, and then I thought about it. The people I knew in contracts — at this point I had four little kids at

home — I'm thinking I have to travel and it's never at my convenience; and I thought the people in contracts I work with never travel.

Misa: Got some advantages, sure.

Shutt: They seem to work nine to five. [Laughs.] So I moved into contracts in 1997. I've been in contract related things since then, and the contracts that I've worked on are selling hardware to the Navy so all of my engineering expertise, you know, my knowledge there, so like in negotiations [pause]

Misa: You'd be super useful.

Shutt: I could support negotiations. For a couple of years, I got moved into an area that had software. It was mostly software rather than hardware, and I was a fish out of water in there. I didn't feel like I could bring much to the table there because I could count slots, but that's about it. [Laughs.] So I moved into contracts, and I'm still doing contracts. And when Lockheed closed, I went to [PDA], a small company in Burnsville; they hired a number of us who were with Lockheed. So it's like old home week; all the people I liked working with before, I get to work with again.

Misa: That sounds like it worked out really well.

Shutt: Yes, really well. So anyway, I moved around. I started out in industrial engineering, moved to the planning stuff; I did manufacturing systems; I did material handling systems, so system design; kind of for a little while after that, went back to do some manufacturing automation, then I moved into proposal management; I was the executive assistant; then I did program management; then I've done contracts management since then. So all of that without ever doing a resume. [Laughs.] You just move from one thing to another.

Misa: Without doing a resume in the sense of needing to find a job outside of your organization.

Shutt: Or even within. Most of those things were; I was very fortunate. Again, I told somebody I wanted to put my stuff in storage and travel in Europe, and I had a job offer, essentially. I did have to apply for a job when I was getting married and trying to get away from my husband. But the executive assistant thing, my boss called me one day and said hey, Jay Jones wants to interview you to be his executive assistant. I did nothing for that. I did that, worked for him for a while, and I said what should I do after this? He said what do you want to do? I said please don't make me go back to proposal management. He said well, go over into program management [and] work for Mike. So I was very fortunate that timing worked out for me well with a lot of things, and I don't know, I've had a good time.



Misa: You said you were getting away from your husband, you were meaning that you were getting out of having him being a supervisor. Was there any policy that forbid that or was it more a question of common sense?

Shutt: Well, he talked to HR about whether he could propose to me, before he asked me, I found out later.

Misa: Cleared you with HR. [Laughs.]

Shutt: And the rule was you couldn't have a family member work for you.

Misa: Right.

Shutt: So as long as we weren't married, I could've worked for him but it was just you don't want to give the — what's the word — the appearance of improprieties.

Misa: Good thing to get out from under the supervising track that he had been —

Shutt: Yes, and at that point, had we been married we would've had to; I couldn't work for him.

Misa: It sounds like as a woman, you didn't experience great frustrations. You had a supportive work environment. You said that about Purdue, but throughout this time,

working in industry, you had bosses that respected your work and that served as mentors that helped you move your career along. You put it that you didn't have to do a resume, but there was somebody that was helping you out in making that next step.

Shutt: There were times I got frustrated. I had worked on a project for a long time, and I happened to be pregnant at the time and there was a big meeting. It was for bidder's brief, that's some business we were trying to run, and the guy that I was working for at that time; I had worked on this for months and when he was putting the plan together for who was going down to support the customer, didn't have me included. I thought what's going on here? He said well, you're pregnant; and I said I know I am. [Laughs.] So I went and actually in that case, my husband was — we've worked in parallel for a lot of stuff. I was the program manager on it and he was the manufacturing side of stuff at that point so he was going to the meeting also. We had two kids at the time, so we flew my mom down. We got adjoining rooms in the hotel. My mom stayed in one room. We flew down with the kids and stayed in the other. During the day my husband and I would go to the meetings and my mom would watch the kids. So we made it work.

Misa: That probably worked out okay.

Shutt: Yes. I think, you know, in a lot of ways because there weren't as many women, I feel like I might've had some opportunities because I kind of stood out a little bit because I was one of the few women. In some instances it might've been an advantage to me. There was certainly the good old boys network, and the guys, you know; there were

women who had big frustrations that the guys weren't asking them to go golfing. But my thought was well, you're not asking them to go have wine with you and the girls. They get to have their friends and you get to have yours, and as long as you get an opportunity; I don't — this is a weird thing — I've never been afraid of authority or afraid of talking back or afraid of expressing my opinion. So I think some of my — if bosses [say] that [I] can't go on the trip, I didn't not go on the trip because he said I couldn't, I went up and I said no, I worked on this and I'm aware I'm pregnant and I'm perfectly fine to travel, and I think I should go on this.

Misa: You were in essence confronting the supposed slight, and correcting the boss' assumption.

Shutt: I didn't pout, I didn't say I was being discriminated against. I was like no, I get to go; nobody else; this is my baby. [Laughs.]

Misa: Yes.

Shutt: And I think I've always been direct that way, and that helped me; and the environment that we had, which was very open and friendly, if you let it be. Another little piece of my story, in the early 2000s I was in contracts and I was working on this hardware program, and the customer and I were having some conflict. There were contracts and we couldn't get things negotiated and resolved, and it was a contentious relationship. So on our side, they decided that they were going to switch and bring in

somebody else, another contracts guy, which was good. My boss said you should get some other experience. That was on a Friday. I went back Monday and said you know, I've got four kids at home now — we had a nanny when they were all little — we don't have a nanny anymore. So my husband and I were both working full time, I was a manager, he was a director; both trying to juggle and the juggling wasn't working very well at the time. So I said to my boss, you know, I appreciate your confidence in me but I think I can't keep doing this, things are falling apart at home, I'd like to work part time, and if I can't I'm going to have to resign. He said it sounds like I've opened up Pandora's Box here. I said you just gave me a chance to think here and things aren't working. When one of the neighbors says oh, we made sure Annie's hair was combed for school pictures, you go oh my God, this is no good. Of course my husband was dropping them off at school [pause]

Misa: And he didn't think about combing her hair.

Shutt: And she had really curly hair; it was a mess. So my boss, he called me that afternoon. I was at work and he just called me to his desk and said I've got permission, you can work part time. What do you want to do? And literally, sitting there, I had no clue what I wanted to do. And I said I'd like to work five hours, four days a week; and he said okay. So until they announced they were closing the facility, I was a part time employee, and for a while I supported the guy who replaced me in the contracts role. So I would work on whatever needed to be done and if it was something with a deadline I'd say well, I got this much done and here it is, he can take it over, whatever. And with that,

working part time, we had the flexibility of you get paid hourly up to 40 hours, which is what everybody else got. So as my kids didn't need me as much, I worked more hours and I could travel, or when things needed to get done at work, I worked more hours but I never gave up my part time status because I knew it was hard to get part time status. I kept it because my plan was when my husband retired, I was going to go back and try to work, you know, get back to 20 hours a week. But for pensions you needed to have higher, because your pension's based on your highest three of your last 10 years.

Misa: Oh, okay, highest three.

Shutt: So I was putting in 40 hours a week even though I still was officially a part time employee. And then when they announced they were going to close the place I went back to full time because I wouldn't want my severance to get messed up.

Misa: You said it was pretty hard to get part time status, so your supervisor made some special effort.

Shutt: There was a time frame there when it was okay, when it was done and I hit that time frame. I was used as an example when they talked about work/life balance. They said look at Mary Shutt, she was a manager and she decided; and we made this thing for Mary. Look, this is how flexible we are. There were some people who did job sharing but four or five years after I was part time, one of my coworkers was having some fatigue issues. She had medical issues and she said she wanted to work part time, and they would

not, without it being a medical issue, they wouldn't just say yes, you can work part time. So for a while it was yes, work/life balance is great. And those of us who kind of got grandfathered in — and there were a few of us — everybody held on very carefully to that benefit because the only thing you needed to change how many hours you worked was your manager's approval. But getting it approved in the first place; so depending on who was up in the corner office, or who was setting the human resources requirements, [pause]

Misa: So you could still work 40 hours in some given week and get paid for the 40 hours, but you would still be working “part time” rather than being required to be working full time. That sounds like a nice accommodation. You lucked out, in a way, and it sounds like a little bit later it was a bit more difficult.

Shutt: Yes. It worked perfectly for me and again, the status was what I was kind of holding onto because they were making it; again, as things move up and down; but I know I was used as an example on a number of occasions, or maybe it was for when they were trying to recruit people. Oh yes, we've got great work/life balance. And again, there were some other people who, like I said, did job sharing, and other people who worked part time. But it was a handful of us, not a roomful of us.

Misa: This has been so fascinating, Mary. Are there any other things that we should record in our conversation just to round out your experiences and perspectives?

Shutt: Trying to think because we were talking about the numbers earlier, and I was just trying to think about people who I've worked with and the concentration; and there's certainly, I think that the mix of male to female, the ratio of women certainly grew over the time that I was at my computing career there. But there's still not a lot of women in the upper management. I'm just trying to think of people, who ended up where and who; you asked earlier about professors at school and females. The women who ended up in management positions at work were HR, and there was one in BV — couple in BV — the engineering field and the IT stuff I think was typically always guys. Anyway, no I have nothing to add.

Misa: I could ask you about the 1980s but the corporate restructuring is going to be much more important. That was a major change in the corporate culture. There's some subtle change that occurs because the 1980s is the decade when the increase in women stops and a decrease begins. But it's going to be difficult to parse that out because in the 1980s, you have this takeover or "merger" to form Unisys. You described that as a quite dramatic change.

Shutt: You know, that one was more dramatic emotionally, I think, for us. Burroughs did not send in their management to our organization. Our organization really changed was when, eventually — well, I'm sorry, now I'm getting confused. Maybe it was shortly after, we ended up with a big influx of personnel from IBM and that ended up being; like when they closed our facility the work went to two previous IBM facilities: one in Owego, New York and one in Manassas, Virginia.

Misa: Oh.

Shutt: So the IBM culture, the upper management that ended up coming in, shortly after the Unisys piece of it, we ended up with a big influx of IBM upper management people.

Misa: That'd be late 1980s.

Shutt: Late 1980s, yes, and then we had Loral in there for a while, which was interesting. And what Lockheed did was, Lockheed just grouped us all together, but it was all of us who used to compete against each other ended up all kind of conglomerated, grouped together. We here, in Eagan, lost our identity.

Misa: You said the IBM management became quite pronounced. How would you characterize that?

Shutt: A general manager and some of his staff got brought in from IBM in the late 1980s to start with, and that was just, well, it was different. It seemed it was a lot more controversial, a lot more in-your-face, not Minnesota nice. Part of it, too, was I was getting exposed at that point to higher levels of management that I hadn't seen, so I was seeing a lot more of the people [that were] 'no, I want it now' and 'I wanted it yesterday' and 'why didn't you think of this before I did.' I was seeing that but I was also dealing with people at higher levels.



Misa: You were moving upwards and so that changes your perspective, too. Of course.

Shutt: I hadn't really thought about that until now. Yes. So there were some interesting people who came in, but just from a different background, different systems, different cultures. The last people who came into Eagan before it got shut down, the last general manager that we had literally had an issue with the culture because he would say to do something, and people would go 'do you really want?' To somebody else, 'do you really want me to do that?' Because I don't think he knows. [Laughs.] So there was definitely a different culture there toward the end. But yes, our Minnesota Nice was our vestige. The other thing was we became part of bigger and bigger organizations. People's desire to stay in Minnesota was detrimental to their personal growth. If you wanted to move up you needed to go get some experience.

Misa: Somewhere else.

Shutt: Somewhere else, yes. People who were somewhere else, they looked at this as flyover land. They didn't see that we had anything to offer here. From a corporate point of view, I think they didn't look at this as a promotion. It was I've got to do some time in the middle of Minnesota in order to move up. And so [pause]

Misa: And I'm sure that changes the work environment, and loyalty, and people's short term versus long term perspectives has to have a big change in how people experience work.

Shutt: And those people who were here on an assignment versus wanting, feeling ownership, had no loyalty to the organization, you know, didn't feel any need to support it. There was an interesting group of people that walked through that corner office that stayed two or three years, and then we'd have somebody acting for a while, and then we'd get another somebody in the corner. And it was just everybody — this has nothing to do with the computing aspect of it — but you'd get somebody new who's the general manager who wants things done differently, and wants where I come from there's coffee at night; there's a pot of coffee that everybody can have. And the next guy says why are you wasting money on coffee? And, you know, just everything; so their expectations are different. And that again, the people at the executive level would feel the brunt of that and they'd coach the rest of us who were down lower. They cushioned those of us who weren't at that level but there was a lot of turmoil and people just trying to; okay, what does this one want? Process is important this week, or is it? Literally, two guys back-to-back, one of them thought that a good measurement of productivity was how many hours of uncompensated overtime there were on time cards, because if you weren't putting in enough overtime you weren't working; there must not be enough work to do if people aren't having to work overtime.

Misa: Oh, okay.

Shutt: And then literally, the next guy said you can't work everybody to death. If you want to grow as an organization, you need to plan for growth and if you're working everybody to death you can't think ahead so you need to stop doing that. So that's different; that's for your next thing on organizational mess-ups.

[Laughter.]

Misa: That's right. Maybe we can have a conversation on that too.

Shutt: Confusing your employees' brains.

Misa: [Laughing] Well, Mary, this has been so helpful. Thank you so much.