Oral History of Kenneth (Ken) Levy

Interviewed by: Stan Myers

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Stanley (Stan) Myers: Ken Levy is the founder of KLA, now known as KLA-Tencor. He was introduced into the Silicon Valley Engineering Hall of Fame in 2005, and received many distinguished awards and recognitions during his career. Ken, it's a long and most interesting history that brings you here today, September 16, 2010, to record the Ken Levy story at the Computer History Museum, let's go back to the very beginning. The first question I have for you, Ken, is where were you born and where did you grow up?

Kenneth (Ken) Levy: First of all, thank you for that wonderful introduction. I wish my wife and children would give me that sort of introduction. I was born in Brooklyn, New York, which is the number one city in the world. I grew up in New York City and stayed there until finishing college.

Myers: Very interesting. What did you like to do when you were a kid?

Levy: I don't know what I liked to do because my father had a very small print shop, and what I really wanted to do, is go play ball and fool around with all the other kids. However, it was made very clear to me that right after school, my job was to help in the family business. At the time, I thought that was really terrible, because everybody was having a lot more fun. Later on in the years, of course, I recognized that it was a great gift to start to learn about business, and learn what it takes to run something and be successful from an early age. If you do that early in life it becomes part of your DNA, and you don't have to think about it. So, I guess while it probably wasn't the equivalent of an MBA, it sure was close and I got that by the time I was 15.

Myers: Makes sense to me. Did you attend public school?

Levy: Yes, I attended public school near my home, and I walked to school. Later, my family moved from our home in Williamsburg, which is near the Williamsburg Bridge. I don't know how they got the additional money, but they did. We moved out of that neighborhood, which was all tenements and a pretty rough area, and moved to East Flatbush. I was in junior high school at the time, and was in an accelerated program. So, I continued to go to school in Williamsburg until I graduated from junior high school. New York City had a lot of special purpose high schools. I was fortunate that there were three science high schools in New York City, Brooklyn Tech, Stuyvesant, and Bronx High School of Science. I took the test to get into Stuyvesant High School. They specialized in an excellence in academics with a concentration in the sciences. They had extremely good teachers, and in addition to that they had a very good student body. The student body was self motivated. By the way, I still go back to visit that high school from time to time because I have established a few scholarships there. Ten years ago, it was rated the number one public high school in the United States. I was just fortunate that the city had the availability of such a fine learning institution.

Myers: It's a shame we don't have more of those.

Levy: Well it is a shame. It's a question of where society, of course, puts its money and invests for the future.

Myers: Let me go back a step from the junior high and just ask you a question. Do you remember your first teacher?

Levy: Oh, I sure do. I remember Mrs. Schiff. I haven't thought about her in a long time, but a certainly do remember her.

Myers: Do you wonder if she's thinking about you.

Levy: Well, I think she was pretty old then, but it would be nice, since she would be looking down at me. That was a time when the teachers, were very professional. These were very, very dedicated, people who took a real interest in their students, but if you got out of line in my public school, your parents were there really fast. I remember my parents visiting a few times, but we usually don't mention that to my children or grandchildren.

Myers: Well, those beginnings build a foundation.

Levy: They certainly do.

Myers: Very important. What were your best subjects in school?

Levy: I liked science from the very beginning; it fascinated me. As a child, when I was in public school, I became interested in astronomy. I thought that was really something that I wanted to do. I liked chemistry, physics and math. I was a good math student, and of course the high school I went to gave me the opportunity to take a lot of advanced subjects, so we could hone our skills and be better. However, I have to say that at the same age, my grandson knows a whole lot more than I did at that age, so maybe the schools are pretty good now too.

Myers: That's good. Well what were you worst subjects?

Levy: That’s really easy, language and English. As a matter of fact, I really thought about being a physicist, but to get a Bachelors of Science you needed to have a language, and I knew that it was not something I wanted to do. So, that made the decision for me very easy. I decided to go into engineering school, not because I knew the difference between engineering and physics, but because I knew that I didn't want to take a language.

Myers: Just a quick question, did you always want to work with computers? Did you know what computers were in those days?

Levy: No, I didn't, I just liked technology. I got into electronics as an outgrowth of my first jobs. So many times when we move into things, we don't know where we're going. We start down a path and that path takes us to our destination.

Myers: You talked about your parents earlier in business, in printing, what did your parents want you to do when you grew up?

Levy: My parents both were handicapped. They were both hard of hearing, and they neither completed more than an 8th grade education. They wanted me to get an education. I think that is why it is so important for children to be motivated by their parents, and the parents to encourage them to do more. My parents knew that if I just applied myself, I could achieve more than they did. I look back and say, "Boy, I owe a lot to my parents," not because of what they taught me, but what they encouraged me to do.

Myers: How did they feel about you wanting to be an engineer in those days?

Levy: Well, I don't think that they knew what an engineer was. My dad was a printer, he didn't know what an engineer did. I do know he was very angry at me one time, when I was a junior in college. He knew I was taking electrical engineering, and that I should be really smart. He gave me his broken hearing aid and told me to fix it. When I told him that I couldn't fix it, because my soldering iron was bigger than the entire hearing aid, he wanted to know what good this education was doing for me.

Myers: Yes, they didn't think you were going to be running a railroad, right?

Levy: No, they didn't. They didn't quite know what it was. They knew it had something to do with electronics. They thought I would make televisions or some other consumer product, since those were the only electronics they ever saw.

Myers: In junior high and high school, was there a particular teacher who inspired you?

Levy: Yes, I took a course in radio electronics, and really loved the curriculum. When I was a junior in high school, I built a transistor radio and learned what these pieces were. Transistors were very new then. I think good schools give you an opportunity to learn some things that you wouldn't ordinarily have learned. It helped me on my way to decide what I wanted to do.

Myers: And that was a particular teacher?

Levy: Yes, it was Mr. Bender, the teacher who taught the course in radio electronics in high school, which was very unusual at that time.

Myers: He must have done other things in that class to really inspire you.

Levy: Yes, we built things, which was unusual at that time. We built things and watched things work. We transmitted signals across the room. It was exciting for a young student to think, without the math background, that there were waves in the air that were transmitting information and we couldn’t see them.

Myers: Who were your heroes when you were growing up?

Levy: Oh, lots of different people in science. Jonas Salk, who by the way was a graduate of my high school. I thought that he had done some fantastic work. I was interested in General David Sarnoff at RCA, who made radios and televisions. All these people who were doing fantastic things at that time were mind boggling, and I said, “I want to be a part of that.”

Myers: When did you first meet your wife, Gloria? Was it love at first sight?

Levy: It was for me, it wasn't for her. I first saw her when I was 14 years old. I couldn't get a date with her until I was 16. I tried really hard. When I saw her, at that age my heart skipped a beat, and it's been the same way ever since. We've been married now 47 years, and we have a great family. It's been a great run and you know we check in with one another every year and say, "Do you want to do it for one more year?" And, we both signed up for it every year.

Myers: You shouldn't worry about it.

Levy: I worry about it, yeah, I do.

Myers: So where did you go to college?

Levy: I went to City College of New York.

Myers: Any particular reason?

Levy: I just read a book about City College which was interesting. One hundred fifty years ago, New York City had lots and lots of immigrants. The City fathers were trying to figure out how they were going to educate all these immigrants, give them an opportunity to go on and become educated citizens. City College of New York was perhaps one of the first free universities built in the United States. I thought about going to private institutions, but my parents didn't have the money to send me anywhere else, and City College had a very good engineering program.

Myers: So what was it like at school there?

Levy: It was big and impersonal. I remember signing up for my classes. They put the schedule of all the classes up on the board and that was my first introduction to the school. The classes were listed all on a big blackboard. We didn't have computers then, so you had to figure out your own schedule and plug in each course. When you would finally get it all worked out, and think about taking this course or that course in Section A and Section B, and finally walk up to the desk to hand it in, suddenly some guy would yell, "English 302, Section C is closed!" They would put a big X through your schedule and you would run

back and have to start again. It tells you how far we have come. It's a trivial problem today, but at that time, scheduling students' classes, was traumatic.

Myers: So what was it like there?

Levy: All the students were kids out of the New York City school system, bright, smart and poor. We all knew we had to work really hard in school because it was free. They told us that there were a lot of people, who wanted our spot, and so we could either make the grade or could leave and that was it. There were no counselors to tell you, "Son, you really should to do a little bit better here." You either did it or you would leave and that was the end of that. It was a very good school and they taught at a very high level. I didn't know it at the time until I went to graduate school, that the text I was using in graduate school wasn't at the level of the text I was using in the undergraduate school.

Myers: You got your first degree in electrical?

Levy: I got my Bachelors of Electrical Engineering from City College and a Master's Degree from Syracuse University, also in electrical engineering. I was headed towards getting my PhD and had finished all the course work towards a PhD. When I was going to take a year off and write my thesis, when my department manager started a new company. I left and went off to do something else, but that's a different path.

Myers: I have to ask you, slide rule or computer that you used then?

Levy: Oh, I used the slide rule Stan. I used a slide rule all the way up until 1985. The only reason I gave up my slide rule for a calculator, was that we were doing a financing at KLA and the investment bankers came to me and they said, "We can't structure the deal like this because the internal rate of return isn't high enough." Being an old engineer, I had never heard of the term "internal rate of return," so I asked, "What is that?" They explained what the calculation was and since it's iterative, I couldn't do it on my slide rule. It was the first problem I had that I couldn't do on the slide rule. That is when I had to retire my slide rule.

Myers: Did you have a straight one or one of the circular ones?

Levy: A straight one. I bought the slide rule in 1958. I have only had one and I still have it.

Myers: Who were the most important influences in your life during college and right after college?

Levy: The most important influence was my wife. The reason is that I really wanted to figure out how to get through school as fast as I could so that we could get married. I have always been goal oriented and that was my goal. I went to school nights and weekends, winter and summer, to try to get through as fast as I could. I had a very good opportunity to learn something about engineering. While I was going to school, I got a job at Bell Laboratories as a technician. I switched to the evening sessions at school, so I

could work during the day and save money. It was at Bell Laboratories that I had an introduction to some very good technologists. They were doing all sorts of wonderful things at the labs at that time. I worked in the teletypewriter department. At that time, the lab was busy trying to put the teletypewriter information across the telephone lines. This meant that for the first time there would be major effort in developing a machine called a modulator-demodulator modem, which is the basis for all of your computer technology data transmission. When I look back, today you can transmit a hundred megabits a second and we were transmitting 110 bits a second, but that was the state of the art across the voice lines.

The people there were very smart. They were very good engineers. I had an opportunity to see the difference between people who were really doing state of the artwork. At that time, Bell Labs was just a fantastic operation. They gave people a chance to do a lot of things, partially because they didn't have to make a profit. For every dime put in a public telephone, the Labs got 1/10th of a cent, so there was a lot of money in the Labs to do a lot of very good work. They were going to develop the first programmable, Solid State Central Office and they needed programmers. Since this was in the early 1960s, there weren't any programmers in the world; they had to train everybody. They took a group of us and they trained us in programming language. It was quite a fascinating place and it was a great education. I have to say that, watching that really spurred me on in terms of being a very serious engineering student. I saw the difference between those people who were really terrific and what they knew, and those people who weren't going to do a lot and what they knew.

Myers: So after college and after Bell Labs, what was your first job history?

Levy: There were good things and bad things about growing up in New York City. The educational opportunities were terrific and it's a great city. However, if you were an engineer, you had to leave New York City because there weren't any great engineering job opportunities. New York City is the financial center of the world; it's not the engineering center of the world. I interviewed with a number of different companies and finally went to work for a company called Link Aviation. Ed Link was the inventor of the flight trainer. The company began in the 1940s building simulators to train the thousands of pilots that the United States needed to fight in World War II. The Air Force realized that if they had simulators, they could train the pilots a lot faster and could give them flight problems that they could never have in the actual plane. You could do an engine out, lose an engine, get a fire in the tail, or do anything you wanted in the simulator to train pilots. I went to work for Link Aviation, which was eventually bought by Singer and it became Singer Link. We did very interesting work there. I worked on the flight simulator for the Apollo spacecraft, and we had all the astronauts come through. Now that's a case where you must have a flight simulator. You can't train people in the Apollo spacecraft. This job really helped me in the later part of my life. It combined all the engineering disciplines. I was in the visual simulation department where we used optics, mechanics, electronics, software and computers. Our problem was so big, that a single computer couldn't do the work. So, we networked three digital computers and ran them simultaneously and locked them together.

I stayed at Link for six years in Binghamton, New York. Binghamton, is in upstate New York, and it's has very cold winters. My children were born there, and while I was there I continued to go to school. Binghamton New York is home of IBM which is why there were so many opportunities there. IBM had a contract with Syracuse University and all the professors from Syracuse University would come and teach graduate courses at the IBM center. It was a very exciting time where we worked on Apollo Spacecraft and the Lunar Module. We did the F-111, which was the first plane where their wings moved in and out

and it had ground avoidance radar. We were trying to train pilots to fly hands off, but it was so scary, no pilot would ever use the ground avoidance radar and take his hands off the controls. This was a great period for technology because NASA was spending large sums on technology development. President Kennedy had committed to put a man on the moon in 10 years, and I am pleased that I played a small part in that endeavor.

Myers: Was that about the time you got had the idea and the concept of KLA?

Levy: No. Two of my senior managers left Singer Link and started a company in Boston called Computervision [CV]. They invited me to join them. I told them that I was not going to Boston because I was going to go up to Syracuse University to finish my Ph.D. I had convinced Singer Link to pay for me to take a year off. However, the CV founders worked very hard to convince me to join them, and I said, "Well okay, I will come to work for you, but we don't know whether new start-ups are going to work. You need to put $10,000 on the side, and if you fail I get the $10,000 and go back to graduate school." Today $10,000 today doesn't seem like very much, but it was a lot of money for me at that time.

They escrowed the $10,000 and I moved from Binghamton to Boston. Computervision went on to be a really great company. It had a short life, but during its time it truly was a star. Computervision was one of the earliest companies in the computer-aided design [CAD]. It was their primary business, that was in 1969 and we were caught in a recession about the time. The CAD business was going to take time to develop. We needed cash to support the business. So, we purchased a small invention in the semiconductor industry that would enable machines to automatically align a semiconductor wafer to a photomask rather than doing it manually.

They gave me the basic technology and said, "You go do this." It was great experience because they didn't say, "You go design the machine." They said, "You are in charge of it and you are the product manager." I said, "What's a product manager? I am just an engineer." They said, "You figure out how to get a design, how to get it manufactured, and how to get it sold. You do the whole thing." That is how I started. I purchased the manual machine from Kulicke & Soffa. We built all the electronics and the mechanics to automatically control and automate the machine. That was my introduction to the semiconductor industry. I went around the country trying to sell the machine. In 1970 the industry was a lot smaller than it is now. There were few semiconductor companies in the Boston area, the biggest one being Sylvania. At that time, just about anybody whoever made a vacuum tube thought that they should be in the semiconductor industry. So, I would start in Boston, go to upstate New York, and then go to IBM. Later, I would fly to Texas to visit Texas Instruments. From there, I would travel to Phoenix, to visit Motorola, and then to the West Coast where I would visit Fairchild and National Semiconductor and perhaps Intel. I didn't always visit Intel, because they were too small and too insignificant and I didn't know if they could afford to buy advanced equipment.

I made that trip every couple of months. I would travel, and we would install this equipment. We later realized that we were buying standard mechanics from Kulicke & Soffa, and we needed it made especially for us. We weren't a big enough customer of Kulicke & Soffa to get their attention, so we bought a little company in California called Cobilt. It was a 12-man company. Our customer in Motorola introduced us to them. He called and told me that there was something wrong with my equipment and told me to meet him at Motorola. Then he called Cobilt and told them there was something wrong with

their equipment and told them to meet him at Motorola. So, he got us to meet in the lobby at the same time. I said, "That's really strange that we meet one another." He said, "Well, maybe not so strange." He said, "You guys need to talk to one another, because neither one of you, by yourselves is a critical mass." Later, we bought Cobilt. I came to California to run it, and ran it for about four years. By our customer at Motorola introducing us, I always thought he really made a giant contribution. During that time, we were very aggressive. We built alignment equipment, photoresist coaters, developers, and optical-projection machines. We were moving very, very fast.

Myers: What happened to the company?

Levy: Eventually the company was sold to Jim Morgan at Applied Materials. Computervision was no longer interested in being in the semiconductor industry. The CAD-CAM business had grown quite large, and they wanted to focus all of their efforts. Then in 1975 there was another recession. I like to say that I am an expert in recessions. I have been through about 10 of them by now. I decided that Computervision was no longer focused on what I want to do in the semiconductor industry, and that I should really be dedicated to a semiconductor industry company. In 1975, I started to raise money for what was then KLA and now, KLA-Tencor. I didn't start out in life deciding to be in the semiconductor industry, but a number of happenstances brought me there.

Myers: So that's kind of why you did it. Who was involved with you when you started KLA?

Levy: Well, there were two of us. My partner in the company was Bob Anderson, and he was the Chief Financial Officer at Computervision. I remember how I decided to do that. I had an idea and I went to him and I said, "Bob, if I have a great business idea in the semiconductor industry for a great product, can you raise the money?" He said, "Yeah, I think I could." That was our beginning. That was our business plan, and the initial business plan was, "I'll come up with an idea and you figure out how to raise the money." In the early days we fully shared the responsibility in the company. I worked the marketing and the technology, and he kept the operations going. He made sure we had cash and I made sure that we used the cash properly.

Myers: And during that period of time and shortly after, what was the most challenging problem you faced, you and Bob?

Levy: It was probably money. I want to take us back and see how hard it was to raise the money. It was 1975 and we were raising the money. The country is in a recession. We had lost the President of the United States, so things were in a big upheaval. The stock market at that time is selling at a P/-E ratio of five, and the investors would say, "You will start this company, but we want to get liquid. So, since the Dow Jones is at a P/-E ratio of five, you will sell this company, but you will have to sell it at a discount, so you'll sell it at maybe a P/E ratio of four. Now tell us how we are going to get a good rate of return when you sell this company at a P/E ratio of four." Money was a major difficulty. The operations of the company were always on target. When I go back at the original business plan, the idea for the first product was really good and the world needed it, but we were all alone in the market. We invented the market, so that was fine. The difficulty was that there was no financing. The original capital that went into the business was $600,000.00. So, in the early days of the company, we watched every penny because capital was just so expensive and so difficult to get. Four years later, when we took the company public,

we were the best investment that some of them had ever had in 25 years of their investing experience. They made several hundred times on their money. Of course, later it became easier for us, but in the earlier days fundraising was what it was all about.

Myers: What was the most exciting period in your career?

Levy: There are a lot of exciting periods, but I have some really interesting memories, which I can share. Our first product was a photomask inspection system. Photomasks are the negatives that contain all the semiconductor pattern information. Our first machine optically viewed the photomask and determined if it was free of defects. A great memory was the first time we took the machine to SEMICON. SEMICON, at that time, was in San Mateo, and we were at this old, barn-like Quonset hut. The machine was looking for tiny, little defects, and the room was filthy with particles raining down. We got the machine working at four o'clock in the morning before the show opened at nine, and that was very exciting. When you are starting a new business, the exciting things are the firsts. The installation of the first machine at AMI, that was really exciting. The time we received the first purchase order was very exciting, but even more exciting was getting paid for it! Of course, when we took the company public, I went back to New York City after having been away for so long, and having grown up in tenements, and then staying in a really expensive hotel in midtown Manhattan, that was really terrific, too!

Myers: I can remember a time you and I walked in New York City along the street towards the Plaza Hotel, and you told me that you and your dad sat on the bench, and said the he would say that rich people would stay at that hotel.

Levy: Yes, my dad used to say that rich people stayed there, and so for years the only hotel in New York City I ever stayed at was the Plaza Hotel. The elation of finally accomplishing something that you set out to do is great satisfaction.

Myers: What would be the accomplishment or accomplishments you're most proud of? Going public?

Levy: Well, I'm proud to have played a role in the growth of the semiconductor industry. It has been a fantastic place to be. Semiconductors have changed the world. Without the semiconductor there would be no modern revolution in terms of information technology. Information technology is based on semiconductors. The whole industry has changed the world. It's changed what we do, how we spend our time, how we learn, it's changed everything. I am really proud that the equipment we built accelerated the development of that industry. Not that it wouldn't have been done without us; of course somebody else would've done it. Maybe because we were there it happened a little faster; it moved faster and we helped, so we were a small cog in this industry and I am really proud of that.

I am also proud of the company we built. Our company won major market share around the world. KLA-Tencor had 70+ percent market share in our products, 70 percent market share in the United States, 70 percent market share in Japan, 70 percent market share in Korea, and we had 70 percent market share in Taiwan and in Europe. I think that is an accomplishment because in an economy where we are losing businesses out of the United States, and we are losing to competition around the world, I am proud that I played a part in building a company that is based here in the United States that wins around the world

and generates large exports. If you think about the problem the United States has, we import a lot more than we export, so we need to focus on what the U.S. industry's place is in the world. I am proud that we built an export engine.

Of course I'm very proud of our many technical achievements. Technology on its own doesn't do anything. Technology, if it's very good, creates job opportunities. It creates exports. It creates opportunities for other people. KLA-Tencor is one of the companies that did that. We have a number of companies in our industry that have also done great work. A lot of the major players have done an extraordinary job for the economy generating growth for the United States. I am proud of that.

Myers: Absolutely. You're right. Do you ever doubt yourself?

Levy: I used to have a statement that said, "Not always right, but never in doubt." We all think about things that could go wrong, but the important thing is that you do the best job you can. You do all the homework that you can. Then you decide on a path and go. You cannot keep looking in the rearview mirror, because you want to go forward as fast as you can. We make mistakes along the way, but I think the key of a good business manager is not that you don't make mistakes; it's that he learns from them. You correct them fast and you don't make the same mistake twice.

Myers: You don't have to admit that, but before I move in a little bit to the future, is there anything, you could change anything or redo or undo any decision-making in your career, what would it be?

Levy: There are things that I wish I had done better, but I don't know that I would undo the things that I did well. Anybody who has done a technology startup, when they get to be my age look back and say, "I wish I would have been smarter and been able to spend more time with my family during that time."

Myers: Let's move a little to the future. I know I'm taking a lot of your time here, but what are you working on now, and the second question to that would be: And why are you excited about it?

Levy: Well, hopefully we go from players to coaches. I hope that I have made that transition. I have worked quite hard on trying to make that transition. The nice thing about not being the CEO of a company is you have the freedom of time to do many things. Both of my sons have real estate businesses, and I work with them some and try to give them the benefit of my experience. I hope they appreciate that. <Laughs> I work on my investments. For years I have built both a stock and a real estate portfolio. I have a real estate company that I built. One of the things that gives me the most pleasure, though, is I work with Israeli Hi-Tech companies. I go to Israel four times a year and sit on a number of boards. I help start Israeli Hi-Tech companies. I am able to combine two goals. One is to build good technology companies, and the other is to help develop a nation. Between those activities, which take a fair amount of my time, I now have the time to spend with my family. We do a lot of traveling now, and so I would say that I spend about 60 percent of my time working, and 40 percent of my time playing, and doing charitable endeavors. So, I am pretty happy with my present life. Having come out of an intense business area, I don't know that I could spend 100 percent of my time playing. It's not mentally stimulating. However, the thing that I miss most about not being at KLA-Tencor is the interaction with

great people on a daily basis. I miss the interaction of the 25 year old kids, who don't know any better and say, "Hey, Mr. Levy, with all due respect, have you thought about this?" And I say, "Hmm. That's right."

Myers: What do you think is the next big technology challenge-- and I can't anymore say "our industry," because it's many industries.

Levy: I think that it's going to be in energy. If that's not the big technology challenge, it should be, because that issue affects the future of our nation more than any other. The fact that we are getting so much of our energy from the Middle East means that our balance of payments are all fouled up. We also have to have large military bases around the world to make certain that we have the availability of foreign oil. If I were calling the shots, I would say we need to put a lot more effort into being energy-independent. That surely is a worthy goal and can consume a tremendous amount of the technology of the United States in many areas. Semiconductors have a big place to play in it, which is the controls of that and the reduction of the requirement for energy and a whole pile of other things. But I think if you say, "What's the one big problem facing the nation and the world today?" it's the energy problem and it's the carbon-emission problem. You could wrap it all up into one; you could solve them both at the same time. Semiconductors have a big place to play in energy independence, as the industry could reduce our energy needs. So, I hope that our politicians make energy independence a national issue.

Myers: And I think you just wrapped that up. How do you think the high-tech industry's going to change in the future?

Levy: Projects are bigger now. It all starts at the economics. Venture capital returns have been poor over the past 10 years, despite the fact that there are some magnificent successes. So in today's environment, if I wanted to start KLA, I don't think I could. On the other hand, in today's environment if I had a better idea about energy, I could probably find funding for that, but the high-tech industry changes. It changed from mainframe computers to small computers. It will change because somebody like Shockley finds something and opens up a small lab here in California, and all of a sudden you will have a new Silicon Valley, but maybe it happens somewhere else.

Myers: The technology jobs in the future you think will be pretty much…

Levy: I think there are great opportunities. One would hope that all the smart people don't go off and get MBAs and law degrees. You would hope that we can attract young, great people into the technology area, because we certainly need them. I think society needs great engineers more than it needs great lawyers.

Myers: You're getting me into a wrap-up question with you, because in looking at the U.S. and our society, there are a lot of concerns how high-tech is supported. And what we've done politically, I don't want to get into that in this interview, but what advice would you give a young person just starting a career in high-tech, and to put on top of that, what call to action would you give young people today?

Levy: I want to rephrase your question because it's not a matter of giving advice to people in high-tech. I think it's giving the advice that I would give to any young person, which is, you have to go do what you are passionate about. If somebody says, "I am going to go into that industry, because I think it's going to be a good industry," but they are not passionate about it and they don't love it, they are going to have a very miserable life. I always remember the little statement that said, "Find a job that you love and you'll never work a day in your life." When I look at the people who made the most significant contributions, they did not make those contributions because they were motivated by the financial returns of those contributions. They made those contributions because they loved what they did. I know when I was young, I woke up in the morning thinking about what I was going to do that day. I couldn't wait to get to the office to go do whatever it was, so I think that if you're fortunate, that's what you do as a young person. If you like technology, you go find something that you really like to do and you do that, and your chances of being successful at that are much higher than if somebody says, "I think you ought to work in that area," as we know. You go through school. A young person goes through school and they take a job, and it's kind of a Brownian-movement problem. If you're really good, you're excited about what you're doing, you'll wind up in the right spot. If young people love their work, they will make great contributions.

Myers: Well, again, on behalf of our industry and on behalf of the Computer History Museum, thank you very much for your time.

Levy: Thank you for having me. Appreciate it. Bye.

END OF INTERVIEW

