Oral History with James C. Blair

NVCA Oral History Collection

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National Venture Capital Association
Venture Capital Oral History Project
Funded by
Charles W. Newhall, III

James C. Blair

Interview Conducted by
Carole Kolker, PhD
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This collection of interviews, *Venture Capital Greats*, recognizes the contributions of individuals who have followed in the footsteps of early venture capital pioneers such as Andrew Mellon and Laurance Rockefeller, J. H. Whitney and Georges Doriot, and the mid-century associations of Draper, Gaither & Anderson and Davis & Rock — families and firms who financed advanced technologies and built iconic US companies.

Each interviewee was asked to reflect on his formative years, his career path, and the subsequent challenges faced as a venture capitalist. Their stories reveal passion and judgment, risk and rewards, and suggest in a variety of ways what the small venture capital industry has contributed to the American economy.

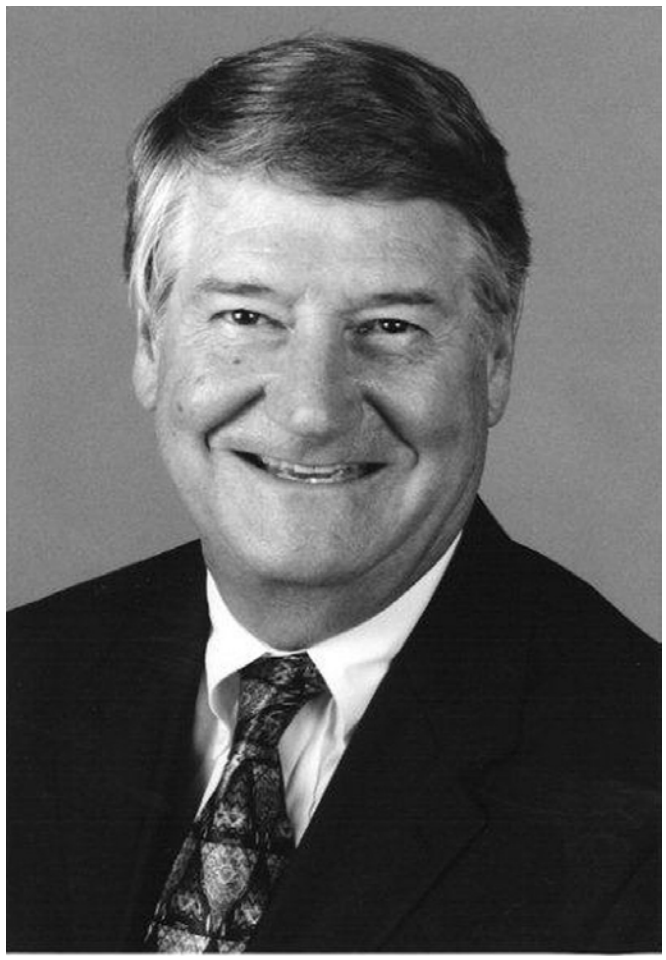
As the venture capital industry prepares for a new market reality in the early years of the 21st century, the National Venture Capital Association reports (2008) that venture capital investments represented 2% of US GDP and was responsible for 10.4 million American jobs and 2.3 trillion in sales. These figures, while significant, greatly understate the collective accomplishments of the venture capital industry.

I'm pleased to have supported this project, which I believe will advance the understanding of the venture capital industry. This collection, along with Paul Bancroft's Bay Area oral history project at the Bancroft Library at the University of California, Berkeley, and Paul Holland's Silicon Valley project for the Western Association of Venture Capitalists, will add significantly to a growing body of venture capital memoirs available to the public sector.

A special note of gratitude goes to each interviewee who generously gave of his time while candidly sharing his memories. Their recollections bring to life the dynamic story of venture capital in the 20th century, providing a powerful perspective on the history of this industry.

Charles W. Newhall III
Spring 2009

VENTURE CAPITAL GREATS



A Conversation with James C. Blair

James Blair has been a Partner of Domain since its founding in 1985. Present board memberships include Cadence Pharmaceuticals, Cell Biosciences, Clovis Oncology, Inc., CoDa Therapeutics, Five Prime Therapeutics, GenVault, Helixis, Meritage Pharma, Microchip Biotechnologies, NeuroPace, and Zogenix. Jim has over forty years experience with venture and emerging growth companies. In the course of this experience, he has been involved in the creation and successful development at the Board level of over 40 life sciences ventures, including: Amgen, Aurora Biosciences, Amylin Pharmaceuticals, Applied Biosystems, Dura Pharmaceuticals, GeneOhm Sciences, Molecular Dynamics, Nuvasive, Pharmion and Volcano.

A former managing director of Rothschild Inc., Jim was directly involved at a senior level with Rothschild/New Court venture capital activities from 1978 to 1985. From 1969 to 1978, he was associated with F.S. Smithers and Co. and White, Weld and Co., two investment banking firms actively involved with new ventures and emerging growth companies. From 1961 to 1969, Jim was an engineering manager with RCA Corporation, during which time he received a David Sarnoff Fellowship.

Currently, Jim serves on the Board of Directors of the Prostate Cancer Foundation, and he is on the Advisory Boards of the Department of Molecular Biology at Princeton University, the Department of Biomedical Engineering at the University of Pennsylvania, the USC Stevens Institute for Innovation, and the Division of Chemistry and Chemical Engineering at the California Institute of Technology. He received his BSE from Princeton University in 1961 and his MSE & PhD from the University of Pennsylvania in 1964 and 1969. In 2009, Jim was the recipient of the National Venture Capital Association's Lifetime Achievement Award. Believing he can "still make a difference in people's lives," Jim continues to enjoy the challenges of his work.

The following is an interview with James Blair of Domain Associates, taking place at his office in Princeton, New Jersey. Today's date is June17, 2009. My name is Carole Kolker.

Carole Kolker: *Let's just get started. Again, thank you very much for setting aside this time for me. And thank you from Chuck Newhall, who has been the driving force behind this venture capital oral history project. Let's just start with your early years. I see that you were born in Ottawa, Illinois?*

THE EARLY YEARS: BEVERLY HILLS HIGH TO PRINCETON UNIVERSITY

JB: Correct. Didn't stay there very long; I went from Ottawa, Illinois at age three months. Just probably by way of history, my father, Albert G. Blair, grew up in Toledo, Ohio. My mother, Sarah Louise Reagan, grew up in Knightstown, Indiana, and went on to attend the University of Wisconsin. When she was there, she married her first husband, who was a senior student there at the time. They had three daughters. And when he was thirty-five-years-old, he passed away. So my mother was widowed with three girls, and she raised them for six or seven years before she met my father. Now, my father had family that was connected with Libbey-Owens-Ford Glass Company. He and his seven siblings had been raised by his aunt and uncle after the early death of his parents when he was nine-years-old. He attended Princeton for two years and returned to Toledo, Ohio, and went to work for a brokerage firm there. He was a bit of a carouser during his twenties. This posed a problem or two for his uncle, who was, at the time, chairman of Libbey-Owens-Ford, which was one of the growth companies of that era. His uncle didn't want to toss him out of the house when he was twenty-nine-years-old, but told my dad, "Get to work, seriously." After another night of carousing, his uncle effectively said, "It's time for you to hit the road. And I have a job for you. Report in to duty at the Owens Illinois Bottling Company," which was in Ottawa, Illinois. And my father went down there within the week, where he spent the next year.

And while he was there, he met my mother, and after dating for a year, they got married. The youngest of the three daughters had serious rheumatic fever, so my father took her to Ford Hospital in Detroit and had her evaluated. And the doctors said that unless my parents moved to a warmer climate, they would probably lose her. So as soon as I was born, they jumped on the train and trekked out to Los Angeles, where I grew up. My father got a job in the aerospace industry. It was about 1940, so the aerospace industry was gearing up a lot for the World War II effort, even though the U.S. hadn't entered the war at that time. I have a younger sister, Alice, who was born about a year later in Santa Monica. So I really think of myself as a native Californian. So, there were five kids, right. Two of them were considerably older than I was when we moved out there — I think my older half-sisters were eighteen and nineteen and they both met and married servicemen, and spent limited time at the house. So, I saw very little of them when I was young. But when I was high school age, two older sisters moved back to the Beverly Hills area, where we were living with her family, and so I got to know her very well. But the only one I knew very well was the youngest, the one that had the rheumatic fever, and she had a heart condition pretty much all her life, and she passed away when she was forty-eight. And my other two older sisters, half-sisters, have passed away as well. As I said, I was close to one of them; I was not close to the other, because we were always living apart.

CK: *What were the expectations in your home — for you — when you were growing up?*

JB: Well, I think basically my parents were always stressing the importance of education, and so I always had a high standard set for me. I think I was like a lot of kids that were growing up — I misbehaved a little bit in grammar school and was accused at times of being sort of the class comedian, interjecting some punch lines at a point in time the teacher didn't appreciate. I was disciplined to the point where my parents had to intervene and talk to the teacher on a weekly basis to find out if I was settling down. I did reasonably well academically. I was always among the best students though never the best student, so I had no trouble academically.

Maybe I was a little bit bored in grade school. High school was pretty normal. We had a very challenging group in our high school. In fact, our high school class from Beverly Hill High School has more advanced degrees than my Princeton classmates do! Six of our Beverly High classmates applied to Princeton, six of us were admitted, and six of us went to Princeton. The better students were applying to pretty much any schools they wanted to go to and getting admitted.

I was a very good athlete in high school. I was on a baseball team that won the California state American Legion Championship, and we had good football teams at Beverly High. I was an All-Southern California football player, which was the equivalent of All-State. I was good enough that I was one of the top twenty-five players in the Southern California area my senior year and that led to a lot of football scholarship offers, and I had a chance to go to pretty much any of the major schools that were playing at that time. It came down to Stanford, Cal, UCLA, or Princeton, which is the one I ended up selecting, only modestly influenced by my father.

COLLEGE YEARS: PRINCETON (BSE); UNIVERSITY OF PENNSYLVANIA (MSE, PhD)

CK: *Why did you choose Princeton?*

JB: I think the exposure and the opportunity to separate myself with a new experience— It was about 3,000 miles away from home; it was an exciting challenge and something that I looked forward to. And it helped that I had a number of friends from high school that were also coming back here as well. It felt new and strange, but there were enough familiar faces that it was fun to be there.

CK: *When you were growing up, you said you were a good student. Were you a reader or a tinkerer?*

JB: Probably more of an engineer, tinkerer type. I was an engineering student at that time, so I always did well on my physics and chemistry and math and the usual things that lead to becoming a good engineer. And I felt my destiny was very much in that direction. My father had been engineering-oriented when he was entering his professional career and worked for companies in the aerospace industry. At the time that I entered Princeton, Sputnik had been put up by the Russians. The space challenge, the sense that the Russians were well ahead of us technologically was drilled into us. And so we thought that we would be expected to respond to the Soviet challenge, and most of us took our academic studies pretty seriously. The first couple of years I was at Princeton, I focused on aeronautical engineering. I didn't fare particularly well in the classroom in that department. It was a very difficult subject because it's a heuristic subject. Heuristic meaning that basically you would have a set of experiments and experiences, and that would define your design parameters. There weren't definitive solutions, which I was kind of pretty good at, and I wasn't very good at heuristic solutions. So, I switched into electrical engineering. I fared pretty well in my course work there, and graduated as an electrical engineer from Princeton, and then took a job within the Radio Corporation of America, or RCA.

RCA (1961-1969)

RCA had a satellite systems group that had started my senior year at RCA Laboratories; and by the time I graduated, "RCA Astro-Electronics" had become a division of RCA that was located in Hightstown, New Jersey, and they were focused on developing the first commercial satellites in telecommunications, as well as weather satellites and spy satellites. So I had a chance to become involved in the early design work of all of those systems and did that for about eight years. During that period of time, I got my Masters and PhD on RCA programs, so it was a very good engineering experience at that time. That was '61 to '69.

And during the ’69 timeframe, when I came back from my graduate work in ’68, a lot of the challenge of developing new satellites had disappeared. The spending for our space program was cut in half by the Vietnam War effort. And so we were essentially writing proposals, laying people off, and it was a very unexciting timeframe. And at that point, I was encouraged by a Wall Street friend to come up and talk to a firm by the name of F.S. Smithers & Co. about becoming involved in their venture capital activities — to do investment analysis work, which I had zero experience in because of my engineering concentration and background. So, I committed to that entry level job on Wall Street, and ended up commuting to New York for about sixteen years! So my start in the venture capital business really evolved from boredom with the aerospace business! That is such a different track from the excitement and enthusiasm that our entry people come in to the business with today. They know what they are getting into, but I didn’t have a clue!

CK: *Could I just go back a couple minutes to both school and college and ask if there were any people who influenced you, any mentors you remember as being significant in determining the direction of your life early on, other than your father?*

JB: Obviously, my father and mother were important factors throughout college I played sports in college — football and baseball — but concentrated primarily on football. In football everyone thinks of who the head coach is, but most of the players would tell you that when they go back and think about their careers, they remember much more about their position coaches, because you spend tenfold more time with them than you do your head coach.

In my case, I was an end, so the person who coached the ends was a fellow there by the name of Cappy Cappon, and he had been an all-American football player at Michigan. But more importantly, he was a Phi Beta Kappa, and so he was a very bright guy. The night before our games, he used to come in and spend a lot of time talking about topics of the day, things that were going on. He would challenge our thinking probably as much, if not more than a lot of the professors on the campus did. So we would have intellectual discussions about Social Security and about Roosevelt's New Deal, and whether these were good social programs or not so good social programs, what their flaws were in the real world. And I think he got me, certainly, and a lot of us thinking outside the boxes a lot about the stuff that we were having crammed down, the book learning. He was a terrific guy. The other thing that was interesting about him was that he was not given to praising people very much; he was given to offering constructive criticism.

Princeton was one of the first teams in the country that spent a lot of time breaking down the films after a game and then literally grading every person on every play. And so the coaches would sit there and give you, literally, a mark on how you performed in every play that you did. At the end of the game, you got a grade. And so you had to concentrate on playing every play very well, because you knew you would be graded on it, and that that would have an affect on whether you continued to start the game and how much playing time you got. And so, it was a very meritorious system.

Cappy Cappon was a notoriously difficult grader in that if you merely did your job you got an average mark as opposed to a good mark. And if the play went for a touchdown, every other coach would give high marks on a touchdown, but not him. He would grade you very tough. You never really knew where you stood with him. You got graded and that was it, and you'd go on and you'd play the next game. I started every game that I was able to at Princeton; I started twenty-seven of twenty-seven games. And so I was an effective player there, but you never knew whether you were doing well or not in that process; you just kind of did your job.

And I think that mentality and that attitude — that basically you did your job. not because somebody praised you but because that's what you were kind of supposed to do — I would say that it definitely has kind of shaped my attitudes and beliefs, and probably in the long term it's one of my life values. Everything you do in life counts for something, so you have to live your life like that.

CK: *How did your undergraduate years at Princeton impact on the direction of your life — whether it's your networking or people you met? Also, you were coming from California — was it a culture shock to come to the East Coast?*

JB: Well, to a degree, but mostly the weather. I don't think it was so much a shock from a standpoint of what went on at the campus. It was then an all-male school. I'd come from a co-ed school, so I think we all found we had adjustments to that experience. I think it's better today than it was then. We had a lot of friendships that we developed over that period of time and quite a few that I've remained close to. I think what you find to a degree today, and elsewhere, is that there's a sense of entitlement if you've graduated from a school like Princeton or Harvard or Yale or Penn, or wherever. But you get disabused of that sense of entitlement very quickly when you get out in the real world, because you're being judged by people who don't give a damn where you went to college. By the same token, you're judging people you work with on the basis of their performance; you don't really care where they went to college. I would say it might've been important in the '20s and '30s, but it wasn't important in the '60s and '70s, where you went to school. There were no entitlements; you just had to go out and do your thing and earn your keep. I would say I learned to judge people about how they performed, rather than where they went to school. So, it was probably maybe the opposite of what you would think in terms of the relationships from Princeton making a difference in my career.

Now, having said that, I would say it's been a pleasure living in the Princeton community, having gone to college there and having good experiences, because when we first started to move into the community we were welcomed unusually warmly by a lot of people who knew us when we moved here. So, there was no culture shock when we moved back in the community full-time. Susan and I have enjoyed that experience, and we've benefitted greatly from the university association; but I would say, more important here. In San Diego, where we have a second home, people could care less whether you went to Princeton or any Ivy school.

CK: *Yes, I want to get to the East Coast/West Coast later, when it comes to business in general. Is there a reason you chose University of Pennsylvania for graduate school?*

JB: Well, they had a great work-study program where you could go to school maybe a couple days a week, and you could work three days a week — although I found myself working on weekends. Penn scheduled their coursework so that courses only met once a week. They would have long sessions. The class would meet for typically three hours on one day as opposed to meeting three days a week for an hour. And so you could concentrate your coursework on a two-day-per-week basis. In graduate school, I'd typically take four courses; I'd literally have three courses one day, and I'd have one course the second day. In terms of being in the classroom, you were only there two days a week, even with a full-time program. And so, it was very amendable to being able to work on the other days, which is what I would do until I was at the PhD level.

CK: *You mentioned work. When was the first time you earned money working?*

JB: Probably in the eighth grade. I was an electrician's assistant, which really meant that when they were rewiring the school buildings in the Beverly Hills area, I would be the guy that crawled under the buildings, where all the spiders were, and run wires under the building and then up into the classroom, wherever that might be.

CK: *How do you get this job in eighth grade?*

JB: I knew about it, and I asked for it.(laughs) It was pretty simple. I knew it was going on, and I just said I wanted to do it. I don't know what the laws were in those days, but no one had a problem with it, and I got paid by the school board. It was a good experience. I would say I probably did it about maybe four hours a day in the summer between eighth grade and high school. I had a paycheck, so that was good.

CK: *And did you work after that, in high school?*

JB: The other thing I did, I raised parakeets, raised birds. I was a primary supplier to the Beverly Hills pet store of pet parakeets. People sometimes wanted to buy the birds trained, so we would finger-train them. So the birds, when they were bought, had their wings properly clipped, and they could take the bird home and have it jump on their finger, jump on their shoulder right out of the gate. So, it was kind of custom orders. If you wanted a bird trained, the pet store would call me up and say, "I need four trained birds within the next four or five weeks." And we'd always have birds that were breeding. "I need a white one." We couldn't necessarily control that, but we did have a group of birds that produced white birds. So, if they wanted a white bird, we'd get them a white bird.

CK: *And when you say "we," did you have a partner?*

JB: I would say my mother.(laughs) My mother probably was more diligent about cleaning the cages than I was, but I was the one that crawled in the cage and would tend to the birds; I did the bird training.

CK: *And you were running this out of your home?*

JB: Yes. I did that for a couple years. That was not a major endeavor, but it was fun; it was enjoyable. I had a friend that did it and then he had to move, and I said, "Well, I'd like to buy the cage and aviary." And I did. And we moved it over to our home, including all the birds.

CK: *So, would you say this entrepreneurial spirit showed very early?*

JB: I would say it was probably my first exposure to entrepreneurism.

CK: *Did you have a favorite subject? You said you did well in school, even though—*

JB: Well, I think when I got to college, I tried to minor in things that improved my writing skills, so I took a lot of English courses; I enjoyed English courses, and I enjoyed theater arts, and European literature; I didn't fare particularly well academically in those courses. You had to write a lot of papers, and engineers weren't very good at that. When I applied for college, I had high marks on the boards for math, but I had very mediocre marks in my verbal skills. But by the time I graduated from Princeton, the verbal skills pulled up even with the math skills, and so I was pleased with that, because that was what I was trying to accomplish in the course work. And of course, you develop a taste and enjoyment of literature.

CK: *Whose influence was that?*

JB: I just think Princeton always had a strong commitment to their English department, so the literature courses were very big; the lectures were good, and there were plenty of courses to take. I could've gone for, say, history or politics or something, but I didn't do that. You certainly wrote a lot of papers, but you didn't develop your vocabularies and things as much as you did in the literature courses.

CK: *You talk about those years through graduate school as busy years,*

JB: That was pretty much the first eight years of our marriage as well. It was a very, very busy time. In addition to school, the first three years I was working probably five or six days a week. You were only supposed to work three days and go to school two on the company program, but we were in aerospace programs doing a lot of system testing at the time, and you had to be there to do the testing. So, you had a twelve-hours-on, twenty-four hours-off schedule. You'd rotate between working all day and then working all night — back and forth. And so it was a tough time to try to squeeze school into your schedule. We had our first child in that time frame, so we had a lot of balls in the air. At the end of my senior year we were married. We had our daughter, Debbie, the next year, and then Lisa three years later. We were living in Willingboro, New Jersey. I was commuting to Penn to grad school, and then up to Hightstown to work, and so there was a lot of auto-commuting time as well.

At that point in time, you didn't think any differently about it, because that's what people did. It's like the work that entry level people in the investment banking firms describe today — long, intense and whatever it is. It's just the way it is when you start out. You just plug and put in the time and the hours. So, I would do it. But, as I said, we had a lot of balls in the air at that time, but we survived. (laughs)

CK: *You referred to the period as "finding a personal sweet spot"—that's a very interesting way to put that — and then you characterized the period as during "this era of responsibility." I figured this was between 1960 and 1980.*

JB: I would say what I did when I left college was that I got thrown into a situation where you had to work hard, and I did that. And then by the time I went to Wall Street, I was used to working pretty hard and fairly long hours, so that wasn't a shock to my system. And I would say the one advantage of working on Wall Street is, you didn't spend a lot of weekends working. You worked a lot during the week, but the weekends were a little bit more relaxed, and they were a little bit more under your control than was the case when I worked for RCA and worked in the aerospace business. You'd decide on Friday what your work assignments were going to be over the weekend.

F.S. SMITHERS (1969-1972) - WHITE, WELD & CO. (1972-1978)

CK: *And so in 1969 you left RCA—You started telling me about going to F.S. Smithers. What were your goals in moving in that direction?*

JB: Well, I actually knew that I didn't know what I was getting into. I was attracted to Smithers by the fellow that was running the venture business, a guy named Charlie Lea, whose name comes up in subsequent discussions talking about Charlie. He was not only a very knowledgeable guy, but also a very pleasant guy. He had a good sense of humor and a good personality. He was very easy to get along with and was very oriented to mentor you — not in a looking over your should all the time kind of way, but when you'd have an experience he'd sit down with you after the experience and say, "Okay, what do you think was good about that? What do you think was not so good about it?" And I learned a lot from that, I think. But I would say, when I went there I don't think Charlie knew what it would lead to; I don't think I knew where it was going, except to say that I needed to develop capability and confidence in the financial analysis area, which I did not have when I went to Wall Street, because I was a techie.

And so, I think that the experiences that I had there in developing my skills as a financial analyst were really, really important to me. I was kind of half-time Wall Street analyst and half-time technical—I guess I would call it an associate with the venture folks. When they'd look at a tech deal, or I might show them something on the tech side, I was probably the only person in the group at that time that truly understood the tech side of things. And with Charlie, like I said, I would get exposed to the VC side.

But on the other side there's the financial analysis. So I started following some technology stocks that were popular at the time. They had some amazing market run-ups. So I did well as a financial analyst, in terms of identifying stocks that were interesting and that, as I said, had substantial run-ups in the market. A couple of them had 10-for-1 run-ups in the market, which is unusual for any stock in the public market. But I had a couple of those that did that—one that had about a 25 run-up — so it was the stock picking part of it that I learned "on-the-job." It was "what looks good, how does that fit into the whole frame of the public marketplace" that came out of that kind of dual role of venture capital on one side and financial analysis on the other side that gave me a sense of the importance of stock picking, if you would, in the process of venture investing. I think one of the things that I've done reasonably well is have a good understanding that when you make an investment you don't get wrapped up in the technology, but you ask, "is this something that basically is going to have broad appeal to the public marketplace," when you make your investment. It's hardly the only thing you consider, but it's certainly one of the things that you would consider. And I guess I would say, having started out with a lot of things that did well, I appreciated the value of stock picking as much as the idea of how to build a company.

As I said, I evolved from Smithers to White, Weld & Company. And my total role and responsibilities at White, Weld was to be a financial analyst. There was no venture capital role at White, Weld. In fact, the industry itself, in the early '70s, was very much in the doldrums. There was very little venture capital work going on. In fact, Charlie Lea had moved from Smithers over to New Court Securities. We were cordial and stayed in touch, but maybe once a year at best. But there wasn't a lot going on in the venture business at that point in time. And so, for the six-year period, from about 1972 to 1978, I was a full-time investment analyst. And then as an analyst, I would identify maybe one or two companies that had been ventured-backed. We made underwriting pitches for Tandem Computers, for example, which Kleiner-Perkins [today, Keiner Perkins Caulfield & Byers] had backed in the mid ‘70s. So I had identified a number of venture-backed companies that were candidates for public offering. But for the most part, I was friendly with people in the venture business, but I wasn’t active in the business from 1972 to 1978.

Then in ’78, White, Weld got acquired by Merrill Lynch. I think about three days after the acquisition was announced, I got a call from Charlie Lea, and he said, “We’re hoping to expand our staff in the venture business at New Court; would you like to kind of rejoin me?” There was probably a three- or four-month delay to put everything in order, and then I joined them — shortly after the Merrill acquisition took place — and became full-time in the venture business once again. I was then a decent financial analyst, as well as a person that understood the tech side of venture, and I’d seen the venture process at work, and I’d had a lot of good experiences in watching organizations develop. I really had a good on-the-job kind of training. Someone once said that not all financial analysts are good venture capitalists, but all good VC’s are good financial analysts. I think that is true.

NEW COURT SECURITIES - ROTHSCHILD, INC (1978-1985)

CK: *I was going to say, you really are self-taught when it comes to the financials.*

JB: Well, you kind of get taught by the people around you.

CK: *As you say, on-the-job training; you started out as an electrical engineer—*

JB: It was a very easy transition back into that business. But for three years at New Court, the first three years, I did effectively very little except tech types of investments on the venture side and a limited number — only one company, I think, on the medical technology side, and that was an existing x-ray company that was being restarted. The company fared okay, but not great. (laughs)

CK: *What was going on in the market in the late '70s? Was it a good climate?*

JB: Well, the public stock markets, or equities and emerging-growth stocks, was dismal in the '70s. It was terrible. In fact, the reasons were different from today's weak equity markets; we had very high interest rates at that point in time, and very few people wanted to risk money on equities when they could make 10 percent on highly rated bonds. If you make 10 percent in bonds, why put it in equities? And so I think we went through most of the '70s with that kind of mentality. And then in 1978 they changed the capital gains requirements. In the '70s, the capital gains were taxed at the same rate as ordinary income, and I think that was a second factor that caused individuals, if not investing institutions like mutual funds, to be less interested. If you were paid the same for a 10 percent return on a bond as you were for an emerging-growth stock, there was no incentive to buy something and hold it for a long period of time.

You didn't find people investing in those things, so it was a tough marketplace. But in '78—and I'll come back to this when we talk about some of the mentors — some of the people that played a leadership role in the venture capital business were successful in lobbying Washington to essentially change the taxation rate. If they hadn't been successful, I'm not sure we ever would've come out of the doldrums, because there just weren't incentives to invest on the part of individuals. And tax incentives are important, despite what people may want to believe. That's the long history of it. And so, to come back to the experience there—I started doing tech investing, and it started catching on. We'd started some companies; they went public. They were on the tech side. I think Teradata was on of the companies that I was involved with at an early stage with two or three friends and colleagues that were in the venture business, and we had a substantial stake in that company at New Court. And I was on the board; it was probably, I would say, the first company that I had on the tech side that went public that I was a board member of at that time.

It was a fairly exciting event for us, because the company had fared very well, and we did well with our investment. Within that business, as I said, I had become involved with a then-public company on the x-ray side, something called Xonex, which was not a good company. It didn't work out particularly well. I think we made a couple times our money on it, but it wasn't something we had great success with, and it was a lot of work, a lot of hard work for the management team, certainly for the board of directors — a lot of traveling back and forth, putting out one fire or another. So I had some good ones and had some not-so-good ones at that point. Along about I'd say 1980, through just the normal process of working with the Rothschild's, I'd become acquainted with the patriarch of the British Rothschild family at that time, Victor Rothschild. I think at that time he was chairman of the Compensation Committee for New Court Securities, if you would, so he would come over on a quarterly basis. When he found out that I was a PhD in electrical engineering, he had me into his office quarters and said, "Do you know anything about probability and statistics?" I said, "Well, I took my course work in it." He said, "Do you ever use it?" I said, "Not much." And he said, "Well, I'm auditing a course at Cambridge and I have a textbook here." And he said, "I like to study. It keeps my mind active." He said, "Would you spend some time tutoring me?" And so I did, and I had some interesting tutorial experiences with him. He used to stay at William Paley's apartment in New York, so some of the tutoring sessions were over there, and it was quite an elaborate place to tutor somebody. I think they had a billion-dollar art collection in their home, which made it very hard to concentrate there, but it was a fun experience.

And I got to know him reasonably well, for somebody that was not a member of the family. He had conceived of an idea to start a venture capital fund that was focused on biotechnology and wanted to understand what the venture process might add to the creation of this fund. As he said, "I want to do a biotechnology fund to fund companies that are working in the field." And this was 1980, so it was very early in the game. Genentech had been started, but it hadn't been taken public yet. And so the venture side of New Court Securities started to kick the idea of a biotech fund around. We made a commitment to become involved with N.M. Rothschild & Sons, the English side of the Rothschild family. So, we started that, but in the mean time, we had started to look at these companies and became a little bit more interested. We knew there was interest overseas. So, in the late 1980 timeframe, we started to look at a company that had been introduced to Charlie Lea by the name of Applied Molecular Genetics, which was Amgen. And it was a seed stage company at that time — there had been five investors, including Pitch Johnson, Bill Bowes, and some other people who then put seed money in and said, "We want to try to raise $18 million for this." So, our firm committed $3 million of the $18 million to finance Amgen's start-up. Charlie was essentially the reason the deal came to Rothschild, because he was close to

Pitch and Bill and some of the other people that were involved. But I became the operative on it, because I had, at this time, become the focal point for biotech within New Court Securities in New York.

CK: *Excuse me. Was it unusual for someone in your field to have your engineering background? Was that something unique to you?*

JB: No, it wasn't. In fact, one of my good VC friends, Brook Byers, was an electrical engineer. And another, Tony Evnin was a chemical engineer. We have a number of people that I think have had good experience in the business that have had engineering backgrounds at the start. And I think we found our way into life sciences by hook or crook, because it was more of an opportunistic thing. One of the things I didn't say is my mother was a Christian Scientist. I went to Christian Science Sunday School, and I wasn't allowed to take biology in high school (laughs), because that was considered to be inappropriate by dint of religion. For whatever it is worth, I think my mother was afraid I'd be a doctor or something (laughs). So, if you talked about some of the negative influences in your life that might be one of them. But I was intrigued with the new science, new area; it was very exciting work. N.M. Rothschild & Sons had an operative there that worked with them by the name of David Leathers, and he and I were the partners that did all the work on this new biotech fund. That new fund, Biotechnology Investments, Ltd, invested in Amgen as well. We then invested in a number of the good early companies at that time: Applied Biosystems, Immunex, Genzyme — a couple of companies that got merged into both of those companies along the way. We'd fly around the country looking for opportunities. In the entirety of 1981, I think we looked at ten deals, and I think we did four of them, or something like that. There were just not that many deals floating around. We waved the flag and said we were open for business. And some other firms were already involved in it: Venrock, Kleiner-Perkins, and Mayfield Fund were early players in the field, and we would kind of work side-by-side as different opportunities presented themselves.

CK: *Tell me about the Amgen story. What was so exciting about that, and why is it such a big story?*

JB: Well, I think what excited the people at New Court about it was the fact that the CEO that had been appointed was a guy named George Rathmann. In the small-world category, George had actually run the x-ray business that was a progenitor to Xonex, the company that I had mentioned before. And he'd done that when it was a division of 3M Corporation. But he'd gone on to Abbott Labs and run the Abbott diagnostics business. And when he took that business over, as the head of Abbott Diagnostics, the business had about a 40 percent share of market; he was in charge of a lot of the product creation for them. When he left Abbott to start Amgen, they had a 90 percent market share in the areas they were working in. So he had a reputation for not only being an effective manager, but he had, in fact, a good nose for products. And so we liked the idea that, unlike a lot of the businesses that were started, were started by people that were not general managers, they were started by people that were pure scientists. And we felt like they were hard to pin down, in terms of what are you going to do and how are you going to make it; those kinds of essential questions were unanswerable at that point in time. But George had good answers to those questions, and he had six product ideas — not all of them were good, but enough of them were good that they got off to a very rapid start.

We liked George, and I think that's it in a nutshell; we kind of felt like he was a reasonable guy. I think George always had the reputation of being a person that — if you were a scientist, you thought he was a businessman, and if you were a businessman, you thought he was scientist, okay. He kind of talked both languages, if you would. He could explain the science to businessmen, and he would explain the business to the scientific side of the house. He was a wonderful leader for that business in its earliest stages. And, I would say, I had some of my biggest debates with him and some of the most fun you could ever have with anybody from an inspirational side. This guy really was fun to argue with and fun to interact with; he did both. George made it fun. When you visited Amgen in the early days, if you went to any scientist's work station, the scientist would always have a little poster up that he could sit down and explain, in relatively easy-to-understand terms, exactly what was going on, what it was he was trying to do. And so it was very easy to walk around there and get reasonably smart, reasonably quickly in the business. So I would say, for me, it was a wonderful first experience. I am frequently referred to as one of the "pioneers" in life science investing, but I really think that much of my early success stemmed from being around people like George Rathmann, Pitch Johnson, and Bill Bowes, because they were all about making sure that Amgen became a REAL company. In the early days of biotech, there were quite a few promoters, so it was good to learn from the "good guys".

CK: *What was Amgen's early success, and how did that come about?*

JB: Well, erythropoietin ("EPO") was obviously the first product they had. From the day they opened their doors until the day they took it into market, it was eight years, and that would've been unheard of. But there were other companies committed to erythropoietin, as well. Erythropoietin is a natural hormone that's in the body that essentially encourages the production of red blood cells. And so the role of erythropoietin and its function within the body was always understood: What does erythropoietin do? Everybody knew that you can go to people that have anemia, give it to them, and it should help them. But the issue was always, “how do you make it?” And you made it synthetically by basically taking the gene that drives the expression of erythropoietin from cells within the body. And so, being able to learn what that particular gene was — the code for the production, in other words — that was the thing people didn’t understand how to do. And they had a considerable effort going on both at Amgen, and at Genetics Institute. And there was also some research efforts going on in academic settings. In one of the academic settings, Amgen was presented with an opportunity to essentially license-in what these people believed was the gene for erythropoietin.

We had set up a facility in Boulder, Colorado, with the ability — once you knew what the code was — to rapidly produce the gene, and then insert that gene into an expression system. And twenty-nine days after we had the code, we were producing EPO. And so that was a major breakthrough that came from Amgen’s willingness to license. Now, retrospectively, it was interesting to know that we were not the first who had been offered that gene, others had. Genetics Institute had been offered the gene, and their Japanese partner told them, “You don't need that. You’ve got a good research effort on your own; you’ll find it quickly enough. It’s not worth spending $500,000 to get it.”

But Amgen spent the money, got it, and it pushed Amgen’s science guys right over the top; and collectively they had this in their Boulder factory, producing the gene that was then inserted; and they were then manufacturing EPO in good volume very, very quickly. And it gave them the leadership position. It gave them a strong intellectual property position that allowed them to dominate the erythropoietin business, as they do currently. So, others have basically slipped into the field in different ways now, but it allowed Amgen to evolve, if you would, from the several that were competing in the space, into a very strong leadership position. After that, they then licensed (from Memorial Sloan-Kettering) a similar gene product that produced GM-CSF, which is a product that produces white blood cells in the body. So, kind of their sweet spot became blood growth factors. And those were the two dominant products for Amgen for many, many years. And so it's primarily how they differentiated themselves.

CK: *How personally involved were you in Amgen, early on?*

JB: Oh, I was a director early on. I was director of the company when they had a workforce of one person (laughs), so that's about as early as it gets. Although I was not part of the company when they seeded it and went around and attempted to raise money to get it going — like the business plan. But I was involved from the time the major money was raised and they became operational.

CK: *And where was Amgen located?*

JB: Where it is now, in Thousand Oaks, California. We'd have regular board meetings. We had about six a year, so I'd be commuting from the East Coast to the board meetings, which usually was a dinner and then a board meeting the next day.

CK: *Was there much tension during the development of their products?*

JB: No. I mean, there's normal tension, but I would say not really. The tensions were already around the financing, the ability of how you were going to finance the business. Do you do a partnership to make it work? And those tensions haven't changed. Amgen certainly has plenty of money now, but as you go through the companies we work with today, those same tensions are present: How are you going to finance your business and do that? But I would say most of the tensions came about with needs to finance and types of deals you did to finance the company and what impact it had.

CK: *Other than New Court, who were the other early investors?*

JB: Oh, Mayfield Fund had put some money into it at that time on the venture side. Pitch Johnson's firm, Asset Management had put money into it; Bill Bowes' firm, U.S. Venture Partners, had invested in it; Abbott Labs invested. A chemical company called Tosco had invested. A really bright guy, Moshe Alafi, had invested. There wasn't a cast of thousands of venture firms that put money at that point in time. I think I named really the primary ones that were involved at that time.

CK: *Was it difficult raising the funds for this?*

JB: No, not the first $18 million; I think that went reasonably quickly. I think that they were smart because they went out and found some strategic investors, which included Abbott. George Rathmann had left them, and Abbott didn't want to lose their relationship with George. I think we put in $3 million; I think Abbott put in $5 million. I think Tasco put in $2 or $3 million, something like that. So, they had $10 million of the $18 million. And I can't remember all of them. They had a couple of other strategic investors that went in there at the time. But it was good fun. It was a good experience.

CK: *According to your questionnaire, in 1985 you left New Court.*

JB: Well, what happened was, we were working with the Biotechnology Investments Limited Fund. The Rothschild's had taken a more active role in the business; Charlie Lea left and went over to another firm, Dillon Reed, and the Rothschilds came in and took the dominant share of New Court Securities, which previously had operated pretty independently. In 1981, the Rothschilds came in and took over New Court Securities, seized control of it. When I say seized, it was a complicated transition. About half the group left. I stayed, but at that point in time started to shift a lot of my time and interest toward the Biotechnology Investments Limited Fund. I started going full-time on the healthcare side. So, I worked very, very closely from, I would say 1981 through '85, with the British Rothschild side, with David Leathers and with Victor and with the folks over there, as we would commence to invest that fund.

It was a very good business opportunity, but we were a diversified firm at New Court-Rothschild. They had started Federal Express in the mid 1970's, and they'd had some good winners before I got there — Cray Research Datapoint and a few others. They had had a number of good companies that they were involved in starting, but they had remained diversified in their approach.

When it came time to try to add personnel resources to the biotech business and the life science business, there were always tensions because they said, Well, we need people to work over here, and we need people to work over there — but continued to bring in generalists. We needed to start bringing in people who had more specific industry knowledge to beef it up.

FOUNDED DOMAIN 1985

So finally, out of frustration — I think Victor and David Leathers were frustrated as well — I told them that I was going to leave. I was going to set up Domain, because I felt that this was a business that needed a concentrated team and not a business that needed generalists; it didn't work. And that was, by the way, a bit revolutionary in those times, because most venture firms had tended to have what I would call generalists; they were not industry-specific. They were not very much focused on either high tech or med tech; they would do a little of everything. So, I said, "I want to create a firm that does nothing but life science investing," at that time.

CK: *What interested you in life sciences?*

JB: I think it was just exciting. We were learning new things, and it was a new area, a growth area. It was clearly taking hold. There had been some good financial successes in the business. I think Amgen — while it was started in early 1981 when they got their business going, by 1983, they were a public company, and we had nice levels of return in those businesses. And so it was very clear that there was public excitement too. Once again, my stock picking senses kind of took over, and I was committed to the idea that there was a good future for life science investing, but you couldn't be effective at it by having people in it that didn't understand the science.

If you spent two-thirds of your time explaining what they were doing and one-third of the time saying, Okay, here's this good opportunity, you were wasting a lot time. And the other part of it was a lot of the businesses that were being started in the life science field were businesses that had scientists as founders, and they did not have business acumen at all. And so the ability of the venture management firm to step in and provide those capabilities seemed all-important to us.

So my vision was to bring the other group of people that had had industrial experience: people like Jesse Treu, who had worked in GE Labs and had worked in the GE health side of things and worked for Technicon, the major blood-testing company; and Brian Dovey, who had been president of Rorer Group when he was there. The vision of the firm was to have people that had expertise in the business side of life sciences — not necessarily the research side, but the business side of it — to complement the science ideas that we were having brought our way in that business.

And so I said to Victor Rothschild, “We’re going to set up our firm. We’d love to continue to manage the relationship, but I understand it’s a family thing and you’ve got to keep it with your folks. But I think the opportunity is too big, and we’re going to move in this direction.” And it only took Victor — which I hoped it would — about a week to say, “Well, we want to go with you.” And he did. It was a more complicated process than that, but Victor said, “I think I’d like to sustain the relationship if it can be worked out on economic terms that the N.M. Rothschild people feel appropriate.” By the time we set up Domain in the middle of 1985, we had our first client pretty much in hand. So, that’s the way we started. And then we set about raising a new fund, but we didn’t start that until, I’d say, the beginning of 1986. And by the end of ’86, we’d raised our first Domain Partners fund.

CK: *What made you think that you were well suited for venture capital?*

JB: Well, I didn’t know that in 1969; I knew it was just kind of a toe-in-the-water kind of approach, and then I got smitten by the bug. I thought I’d probably be out working for one of the newly created companies in two or three years, and I’d have a destiny other than RCA. So, I’d try it for a while and see if I liked it.

CK: *How about by 1985, when you were starting your own firm?*

JB: Well, there wasn't any question; I knew I could do it then. By 1985, I'd been at it for sixteen years. In my mind, there was no question I could do it. Another part of it that was pretty important was — and I think it's important to say this, because we get into the people that had big influences on it: On the floor right below us was Accel Partners; Jim Swartz worked in the office literally right below this one. And when I was considering starting Domain, back in 1985, I told Jim what I was thinking about doing. (I'd actually had a couple of other opportunities to leave and go work for other people, although I decided in the end that I didn't want to work for other people.) The Rothschilds were fine to work for. The problems working for the Rothschilds were no different than the problems working for anybody else: When you're working for somebody else, and you don't call all the shots, you don't decide what the organization looks like. I could get other jobs, and I'd have the same discomfort. And so, you get to a point where you sort of sit there and say, This is the business opportunity; This is the way it ought to be done. And despite other people saying: You can pretty much do what you want to do, you don't do it as quickly as you want. And what Jim said is: "Come down, give it a go." I said, "I'm going to try to get the Rothschilds to support this thing in the beginning." And he said, "Well, if you don't, we'll support you down here. You can work out of our offices." We actually were going to sublet some space from them in the very beginning. He made it available. He said, "You can use all our secretaries. You can use our office to get started. Maybe it makes sense for you to become part of our effort." "But," he said, "I know what you want to do, because that's what I did."

So, Jim was very gracious in opening up his organization and his firm to make us feel at home and to give us the courage to get started. And he also said, "You *will* succeed. If you have any uncertainty, don't, because you've been successful in the environment you're in. You will do better independently. You'll do better because you'll be making a lot of decisions more rapidly." And so I would say the answer to your question: What gave you the courage to basically strike out on your own? The answer is, it's the comfort of people that have done it before and had given me the assurance that, basically, if you think you want to do this, don't have any uncertainty that you can't, because you can.

CK: *Are you a risk-taker by nature?*

JB: Apparently (laughter). I gamble very little, but if I gamble I know what the odds are. I don't buy a lot of lottery tickets; I'll put it to you that way.

CK: *Are you competitive; do you see yourself as competitive?*

JB: Very competitive — I would use the term — in a gentlemanly way, in kind of a subdued way. If I'm going to play golf, I don't care; I'd like to win, but I don't care.

CK: *And how about your energy level?*

JB: Reasonably high. I'd say pretty high. Very definitely. Not a type A. I'm trying to differentiate between being energetic and being type A; I'm not a type A person, but I'm energetic.

CK: *Do you have a certain exuberance for the work that you're doing?*

JB: Oh, there's no question about it. That's why I do it. I'm not a young man anymore (laughter), so what keeps you going is what you're doing.

CK: *Has this exuberance characterized the way that you've lead your life?*

JB: Oh, I think definitely, very definitely, whether it's on a leisure-time basis — Susan and I don't spend a lot of leisure time sitting around, okay? We're going someplace, doing things.

CK: *How did you decide on Domain as the name for your firm?*

JB: I had a contest. I said, "We're going to name the firm." And I said, "I'll have a $100 contest to come up with names." I won.(laughter) I liked my name better than anybody else's. I wanted to have something that was not focused on the individuals that were working within the firm, and I wanted a word that had connotations in the multiple disciplines that went into our business. If you look at the word "domain," there's a legal definition that ties into eminent domain. If you look into physics, there's magnetic domains that relate to things. If you look into mathematics, the concept of the domain has a different sense. A lot of these things all sort of tie together. So you had a word that basically meant something different to people depending on what their perspective was, but it reached into the different disciplines that I think were important to our business. I think that was the reason for it. And the other part of it was, after sixteen years of commuting then relocating the business in our hometown, near MY domain. And finally, it was a six-letter word that fit on a personalized license plate (laughter), so there are a lot of criteria that went into it.

CK: *And why did you set up in Princeton?*

JB: We lived here. That's the simple way to put it. But the rationale and the reason for it was that our business was one that required a lot of interactions with pharmaceutical companies. New Jersey was the heart of the pharmaceutical industry and remains the heart of the pharmaceutical industry: You had Bristol-Myers Squibb, you had Johnson & Johnson, you had Merck, you had Schering-Plough, you had Novartis and Warner-Lambert. So, you had the major pharmaceutical presence here within the state, and it was very easy if you needed to interact with these companies.

The venture backed companies out West were always coming back here to meet with people back in the east. And so the proximity to all of that was appealing. And also, I think it's important, this is a boutique business and so you don't need to be in major financial centers to be effective. In fact, I think it's an advantage to not being in the "Big Apple." Our location also gives us some point of differentiation. Princeton can accommodate a boutique business very, very nicely. And, it's a pleasant place to travel to, as you probably learned yesterday.

CK: *Yes. So, it's 1985 and you're starting your own firm. What's the market for new VC funds in '85?*

JB: A lot better than today. With our BIL [Biotechnology Investments Limited Fund] relationship, we had the ability to go out in early 1986 and talk about a five-year track record. They were outstanding by any measure, so it was a good basis on which to go out and start fundraising. It's always very difficult for a new group to get financing in the venture business because you don't have a track record. But here we were able to take an excellent track record, plus a continuation of the entrepreneurial relationships that we had through the Rothschilds, because we had the same client. So it wasn't as if we were going out and trying to raise money with no clients. We had an existing management activity, so you had some sanity to the VC fundraising process.

CK: *You keep saying "we." How did you put together this team?*

JB: In part, I had a young woman that was working with me at Rothschild in New York that was one of our founding team members, Jennifer Lobo. She did not remain involved in our business after our first Domain Partners fund, but she was a founding team member, and we asked Jesse Treu and Kathleen Schoemaker to join the founding team. So, there were three investors and a financial partner right out of the gate when we started our fundraising in early 1986. When we brought Jesse onto the team, we took him to the UK so he could meet all of the London team members.. We had always planned on having a fourth investing partner, so we brought Brian Dovey in as a partner in 1988, shortly after we had raised our first Domain Partners fund.

CK: *Equal partners?*

JB: Yes, exactly. But the point was that Jesse and Brian were industrially experienced people who were coming into the firm, which was pretty much what I said I thought we needed to do. When I go back and think about raising the fund, we had the normal difficulties of getting some recognition because we were a new group. To get out of the gate, I think we were trying to raise $40 to $50 million, and we ended up with $41 million. As I look back on it, we had a lot of fits and starts about it, but for the most part we had a fairly easy time with it, and that got us going, and then we got it done. That was not the hardest fund to raise.

CK: *I'll want to hear about the later ones. What were your challenges — your early companies that you might want to cite.*

JB: We got out of the gate pretty well. I think we had some early success with a company called Gensia. It fared well. Its products never made it to the marketplace, but the company itself did well. It was well-received by Wall Street. We had a good return on that one. And we ended up resolving its longer-term problems with a merger with a well established operating company called Sicor, and the combination, subsequently, got merged into Teva, I think. The point was, we resolved the problems that Gensia had with the clinical trial program with a merger. So that ended up going okay.

We had a company called ImmuneTech Pharmaceuticals that struggled a bit with the FDA; so we acquired a small allergy products company that became Dura Pharmaceuticals, and it became a very large success. When we acquired the original Dura business, it was a $3 million business operating principally in Southern California. When we sold the company to Elan, eight years after we made that acquisition, it was a $350 million company which we sold for just under $3 billion.

CK: *How do you find the companies or the scientists?*

JB: They find us, but we do a lot digging for products now. We try to find products that are already in clinical trials that big companies don't want anymore, principally outside the United States — Japan to a primary extent, and to a lesser extent, Europe. We have a team led by Eckard Weber and Debbie Liebert that circle the globe and visit these larger companies. They tell these companies what we're doing and ask them if they want to spin out any products that we might develop. We also do a lot with people we've worked with before, repeat entrepreneurs, or teams that we've backed in the past — when they are onto their next idea. We tend to finance and support them on a consistent basis if they've done well for us in the past. We're not unique in that belief, but we probably reach out a little bit less to new things that might just come in over the transom than maybe others do. We try to identify areas and talk to teams that we work with and say, Have you thought about working on this idea, that idea? And we'll direct good teams towards things that we think are important; so we get to work with the same people. Maybe they are our ideas, but they get the company started, and they get it going in that sense.

CK: *And how involved do you get personally with each of these companies?*

JB: I'm on twelve boards now, so I'm pretty involved. But we have ten other partners and principals who take an active role as well, so I am hardly alone.

CK: *How involved do you get emotionally?*

JB: Emotionally? Probably a lot less than I used to be. I get enthusiastic, but there are very few problems that are new; I don't see many new problems. I see a lot of old problems that tend to resurface in new company situations. And so I go out, and as those problems surface I just express: “This has happened before. Here are some people that it happened to. Why don't you talk to them?” Or let them resolve the problem. One of the few good things about being older is you’ve seen most of these things happen before. We’re in a tough economic environment now; I’ve never seen the depths of the financing problems that our companies face before. I’ve seen these types of problems with individual companies, but I’ve never seen it across the portfolio as we do right now.

CK: *From a political perspective, what is going to slow things down for you — slow things down for the industry?*

JB: Well, I think right now there’s a very clear failure on the part of the leadership in Washington to understand the devastation they are wrecking on the innovation gene in the United States. I think they’re basically killing innovation in a very big way. I don't think they intend to, but that’s what they’re doing.

CK: *In what way? How are they affecting this?*

JB: Our congressional leaders have no appreciation for the capital formation process and what stimulates capital formation and the capital flows in areas that they think are important. By way of example, they want to overhaul the healthcare system. There's no way they're going to have a favorable impact on that, because the only thing that's going to change the economics of healthcare delivery is technology. And they've killed any interest on the part of the investment sector in putting money into innovative new technologies; they've killed it. They're trying to squeeze down patent life; trying to put systems in place that will in effect control the prices of innovative new products. They are putting bureaucracies in place that are ineffective. We're turning ourselves into a "can't-do" economy, rather than a "can-do" economy.

CK: *Are we overregulated?*

JB: Yes, and it's going to be a disaster. Some wags say we don't have to pay any attention to what the politicians propose for healthcare reform, because they can't reform it. But we continue to hear the politicians promise people they're going to have wonderful access to healthcare because it's now going to be paid for by federal insurance. But this assumes that there is an unlimited supply of health care providers, i.e., doctors and hospitals, and ERs just sitting there waiting for 40,000,000 new patients to present themselves for treatment. Well guess what — there won't be any doctors. That's what happened to Massachusetts. They essentially said, Okay, everybody now has healthcare. They all piled in and there wasn't anybody in the office to treat them. I'm taking it to the extreme, but that's exactly what's going to happen.

They tell the doctors: You can't make more than X, and by the way, your malpractice insurance premiums just doubled. And the doctors say: Well, I won't practice anymore. You can't make people practice medicine. We provide significant federal grants to med schools, and half the graduates of med schools are international students who get trained here and then go right back to their countries and practice medicine. So, we're not adding to the pool of physicians here in the United States. The number of people that stay in the practice of medicine after med school is declining very rapidly, because there's not a financial incentive to do that.

So, it's a very scary world when you sit there and say there's a shortage of quality teachers, well, there's a huge shortage of quality physicians. Your hospital systems are all unionized with job preservation basically being feature number one, so the incentive to implement new technology to basically improve patient care is limited at best. There's no incentive to do it, because the hospital administrations have sat back and said, Well, I've got to sell it to the unions, and they ain't going to buy this. And it's a quagmire that's going to get worse, a lot worse, before it gets better.

CK: *Let's talk about Domain and some of your greatest challenges and rewards, and then we can look at some disappointments, I'm sure there have been some along the way.*

JB: I think our biggest challenge has been to manage the organizational change that has come with our growth as an asset manager over the past twenty-four years. When we started Domain in the 1980's, our philosophy was to bring in some industry expertise so we could help our entrepreneurs create new companies. And the entrepreneurs, in those cases, typically being scientists that were not experienced in business. I would say by the '90s, we started to see repeat entrepreneurs. We started to see people that were more professionally management driven, and so the need for us to fill in on some of the business functions within their companies had started to disappear. Those skill sets were not unimportant, but as we started to build our organization we were able to do it by bringing in younger people that could support us in our due diligence, and hopefully become good, life science VC investors, despite the fact that they had not perhaps spent long careers in the industry.

So, we started to hire associates. In doing so, we built more of a hierarchy within Domain than we had in the beginning. In the beginning it was just kind of four investment partners doing their thing with no support underneath. And in the '90s, we started to build that support team underneath us. And that allowed the senior people to get more leverage on their activities. Now we have a very welldefined structure, where we have sort of a good mix of people from an age point of view — all the way from me down the line to our youngest analyst, who just turned twenty-six. I would say in the beginning of Domain we had no need or requirement to develop the people within our team, but now that's a very big part of what we're trying to do — to mentor, train, and sustain a good culture despite occasional organizational changes. And so I would say that's been both a challenge and a source of pride. It's a challenge in that it's not easy to maintain one's culture; you've got to think about it overtly, rather than just in your own mind. And we have to sit down and talk about it on a fairly regular basis as: Are we behaving culturally in the manner that we want to behave? Are we projecting, inside and outside the firm, the values that we think are important to us as a business organization? And I would say that it has been a source of pride because our organization from top to bottom respects that culture, and individuals practice it in their day-to-day work.

CK: *When you say values, what in general?*

JB: Remember that the original Domain Associates' thesis that having an industry-focused, venture management company was a novelty. And so everything we've done within our organization has been done to make the entrepreneurs' life easier and his enterprise more successful? We want to be the most entrepreneur-friendly firm out there. We want to be able to see the world and think the way the entrepreneur thinks and share his concerns and share his successes and sort of make the entrepreneur king, if you would. That's a set of Domain Associates' values. That is part of the culture that we want to perpetuate over time.

A lot of the venture training that younger people get goes along the lines of, Well, you can put certain things into a term sheet, and then if you don't sell the business for exactly what you wanted to sell it for, it can come out of the entrepreneur's hide rather than your own hide. That's not consistent with our cultural view as a firm. I'm not saying that those terms don't creep in, but our behavior, in terms of how a transaction might come down, must retain incentives for the entrepreneurial team. I'm using that as one example, but there are a lot of other examples. When an entrepreneur calls, does it take us five or six days to get back to them, or do we return his calls right away? When we're sitting at board meetings, are we all working on BlackBerries, or are we listening to what's going on? When a company comes in to present to us for the first time, do we have twenty people up and down, running in and out of the room, tending to other things, or are we attentive? That's what we're talking about in terms of, basically, how are we perceived by the entrepreneur coming on the site. I would hardly represent that we're perfect at it, but I think we think these are important values, and those are the values that we try to build into our culture.

CK: *And I would ask, is this unique in venture capital; because one of my questions is the relationship between you and the entrepreneur. I assume that your answer would be different than what I usually would hear?*

JB: If I went through and told you who my twelve best personal relationships (excluding family, of course) with other people are — they tend to be with entrepreneurial friends. Susan and I socialize a lot with our entrepreneurial friends on a casual basis. We take great pleasure in each other's company. I think you would find that it doesn't go on as much in other communities, but I think one of the reasons for that comes back to the whole concept that we're focused on the businesses that they're interested in and we're interested in.

It also means that we don't jump over to investing in clean tech, and we're not shifting gears towards windmills, or trying to create new energy policy; that's not what we're all about. And the entrepreneurs, that's not what they're all about either. So we tend to have good, steady dialogue and communication with them, because the things that they're interested in remain interesting to us. That may well create a whole other set of problems for us, because the private equity investment community's attitude towards life sciences waxes and wanes with the times. And so we find in times like the present, people are concerned about the policies emanating from Washington and are less interested in deploying capital in our sector. And so we pay the price for that. We find fundraising is very difficult now, compared to the environment of either the early 80's, or earlier this decade. We know it's because the investor attitudes are basically: We don't know what's going to come out of the current administration. We don't know what the FDA policies are going to be. We think this is a big, black hole. We're not sure what's going to happen. So, the investors express their lack of certainty in our convictions by basically not giving us as much money as they did. I understand that. But we think this is too big a sector of the economy to basically change radically any time soon, and that policies are going to have to basically evolve in such a way that innovation continues.

CK: *We talked about Amgen, and now I want to hear a story about something that you've done more recently that you would like to talk about.*

JB: I would say that a concept that we have pioneered in life science venturing is the approach we have taken to preserve or create value in those companies that were struggling, We did it essentially by merging-in, or licensing-in technologies or operational elements that basically didn't exist before within these companies.

I mentioned Immunetech Pharmaceuticals that had run into problems with the FDA. So while we awaited FDA approval of Immunetech's allergy products, Immunetech bought a small company, Dura Pharmaceuticals; and as I mentioned, we took a $3 million sales company to $350 million when we sold it eight years later. So, the point was, we had a business that was going nowhere — that was bleeding $10 million a year just waiting for FDA approval to one that was nicely profitable. And we've repeated that. Volcano would be one that was a concept company when it was started in an area that related to vulnerable plaque in coronary arteries. The build-up of arterial plaque requires you to either perform angioplasty procedures to expand the coronary artery, or put a stent in to kind of keep the coronary artery open.

Sudden cardiac death is usually caused by a rupture in the coronary artery. This is caused by the softening or a weakening of the coronary artery wall, and often this is preceded by the existence of "vulnerable plaque," which has previously escaped diagnosis, since the nature of the vulnerable plaque makes it obscure to the types of imaging technology that indicates the presence of classical, arterial plaques. And so we started a company, Volcano, to develop methods to determine the presence of vulnerable plaque.

After some fits and starts, we latched onto some technology out of the Cleveland Clinic that permitted such imaging when used cooperatively with traditional, IVUS imaging. Subsequently, we acquired an IVUS company that was doing about $30 million in sales; it was number two in the U.S. market, well behind Boston Scientific. By adding our novel image processing technology to the traditional IVUS systems that we were then selling, we have been able to provide cardiologists with a vital new set of diagnostic tools, while at the same time, significantly improving Volcano's market share. And also, the usage of IVUS with this new modality of imaging has become tremendously expanded. Volcano's sales rate this year will probably be close to $220 million, all of that in the space of about six years.

CK: *Six years sounds like a short time, in terms of life sciences.*

JB: Yes. But you cannot do things in this timeframe unless you constantly re-evaluate your situation and see if there might be a few shortcuts you can take by doing a strategic merger. We have done this with great success on several occasions at Domain and is now part of our DNA.

We had another portfolio company called GeneOhm Sciences that had a wonderful platform for molecular diagnostics that we had licensed out of Cal Tech. As we continued to work on that, we became exposed to some science and a company in Canada, which we acquired, that had a rapid, newly approved test for MRSA. It didn't use the original technology, but it got us into the marketplace where we felt our technologies might be useful downstream. And the MRSA test became important enough that Becton, Dickinson came to us and said, "That's a company we need, and we'd like to acquire it."

I previously mentioned the Gensia situation and the merger with Sicor. It changed the character of Gensia and preserved the value of that investment for really all of the people in both the public and private marketplace. What I'm trying to get at is the idea of looking at transactions beyond the traditional capital-raising, money-raising transactions, to change the character of the business unit to make it survive and thrive even though you might've had some problems with the pace at which your original idea started to unfold. So we've come to thinking about problems within our companies as possible opportunities if you kind of change your focus and you look a little further away than just what is it you're trying to do and be single-minded about your purpose and getting there.

CK: *Have you had any great disappointments, whether it's due to the company or the FDA or—*

JB: Well, I would say the FDA gets a lot of the blame, sometimes, when you have a product that hasn't been approved. But generally speaking, it was the clinical trial that failed, not the FDA that failed us. This is just part of the risk we take in our sector. I think we've had a couple of surprises from the FDA in the past, about things that they have turned down. But generally speaking, either the trial results were predictive of those problems, or the correspondence from the FDA about the conduct of the trials pretty much let us know that we were headed for trouble.

CK: *Is there any one company in particular that you remember that kept you up at night?*

JB: Gensia had a trial that went on and on and on, and we just weren't going to get there. We finally had to throw in the towel on it. But it wasn't the FDA's fault. By that time, we just knew we weren't going to get there. I would have to say that we've had probably two surprises in our portfolio in the last five years where the agency didn't approve something we thought they would. And in one case, they recently reversed themselves and approved the product. And the other product, it might be reversed, but it might not be. Now, we had clinical results with a company called Novacia where we had some outstanding results in Phase 2 testing. But when we did a large Phase 3 test, the results we had in Phase 2 weren't repeated. Even to this day, we don't have a good understanding of why that happened. We have some suspicions, but the point was we were shocked at the difference in the results in Phase 3 versus Phase 2. So, we've had some disappointments like that, but you could hardly say they were the FDA's fault. They were just the results of the trial.

CK: *Well, maybe I shouldn't have inserted the FDA into your disappointments.*

JB: No, we've had some clinical failures, and I would say that would probably be the one that I was personally most surprised about, because the result was not what we would've expected reasonably. We'd had two trials earlier that were suggestive of outstanding results.

CK: *On an average, how long does it take to bring one of these new drugs to market, or these new products?*

JB: Well, I think ten to twelve years from the start to the finish, but we won't do that anymore. We have developed an investment strategy — about eleven years ago — that we call, "Five Years to Liquidity." In other words, if we don't see ourselves in a position to commence liquidating our investment in a five-year timeframe, then we aren't interested in making that investment. Now, when I say five years, it might be three to seven years, but we're not going to go in and do something where we know it's going to take us ten or twelve years. We can't do that anymore and attract new money to our investment partnerships.

CK: *Why did you change?*

JB: Because you could not make enough of an investment return doing that, because the public capital markets were basically waiting further and further in the product development process before they would reward you. In other words, in the beginning, if you had something exciting that you were doing trials on, people would speculate that it would be good and bid up the price of your stock in the public market. By the '90s, that just stopped dead. So, in the '90s, the people started saying, We need to see strong clinical results before we'll even consider buying the stock. And now, I don't think people are real interested in the stock until they know that the drug's going to be approved based on the results they've had submitted to the FDA. But clinical trials are binary events which are frightening to people, and so they're staying away.

What that means is that you're not going to see any value increase from Wall Street — maybe from a corporate acquirer you will, but not from Wall Street. We find it's better to have interest from both Wall Street and healthcare companies who might acquire our portfolio companies. So we need to make sure that we can get through that final clinical trial, or the trial it's going to take to get a corporate acquirer interested. We need to get through that process, and you've got to be able to get through that process in, say, a five-year timeframe.

CK: *So, you're entering at a later stage, after they've met some milestones?*

JB: Yes. And so, by definition, we will create a brand new company to acquire something that's far along. So, we acquire the product and do the testing on it and move that along.

CK: *When you look back, which venture will you say: "This was my greatest thrill"? Maybe not your greatest success — but something that you perhaps had your heart and soul in.*

JB: That's interesting. I think, more recently, we've had an experience with a company called Pharmion that was probably a good thrill because it was one that we invested in shortly after we adopted this "Five Year to Liquidity" mantra. And it was kind of, in our minds, proof that we were on the right track.

It's a company we sold to Celgene in the spring of last year. We closed the transaction and we sold it for $2.9 billion, but we had started the company from scratch in about 2001. So in about a seven-year period it went from startup to full liquidation. Along the way, we had distributed half of our holdings, probably four years after we invested. And then we repurchased shares subsequently and made a good return on those as well, because the stock had been depressed in the market. By the time we sold it, it was about a $275 million sales company and growing nicely and with some European product approvals that were going to change the dynamics of their business. And I would say that was one where we had the thrill of victory — that the Pharmion exprerience was very satisfying primarily because of the dynamics of the board working with the management team to always "do the right thing," and some of our theses about, "this is how we should invest; this is what we should be doing." There was wonderful execution by the management of things that we had felt. It validated some of our thinking about our strategies and tactics in this business.

From a strictly personal point of view, the thing that makes my job so satisfying is that their products really make a difference in people's lives. And as I said, we don't see it as closely as the people who are working for the specific companies do, but you get communications, you get letters. I remember a letter George Rathmann read at a board meeting at Amgen from somebody who had stopped having to go to dialysis centers because Amgen's EPO enabled the patient to regenerate red blood cells. Just a letter about how the patient's life had changed as a result of the availability of erythropoietin. It was a tear-jerker.

This was one person talking about it, but you realized how many lives were being affected, because you knew how many patients were on the drug, and they were all being affected the same way. I had a friend of mine whose wife was an end-stage renal patient. He knew I was involved with Amgen. She was in her 70's when she died, and when I told him how sorry I was, he said to me, "But you should just know the difference Amgen made in her life, especially the last years of it." He said, "She was a goner. She was never going to have the lifespan that she or I would liked for her to have had, but the Amgen products made such a difference." And that makes you cry when you hear that stuff. So, I think that's part of what kind of keeps you going, because you start having a vision of: if this works, what a difference it could make in peoples' lives. When we were out raising Domain VIII recently, someone asked me, "Why do you want to keep working?" I said, "Because I think I can still make a difference in people's lives."

CK: *I was going to ask, how do you feel when you're slammed by Wall Street and you know you have a product? What does drive you?*

JB: Mixed feelings. We go buy more stock. If we think we're right, we buy more stock.

CK: *And so personally, do you have a way of handling stress*

JB: I feel stress, and usually when I do I sit down at the computer and I make up a to-do list. Stress comes from feeling that you're out of control. You need to sit down and say, "I can only do five or six things today; what are the five or six things I need to do?" And just handle it on a day-by-day basis.

I mentioned my football coach, and one of his favorite lines was: "Never spend a minute, or even a second of your day worrying about things that you can't do anything about. Only worry about the things you can do something about." So a big part of stress management is asking yourself if you are worrying about things you cannot control. If so, you need to redirect all your efforts to things you can do something about.

CK: *Is there a difference between East Coast culture and West Coast culture, when it comes to venture capital? Or maybe, more specifically, in the life sciences.*

JB: Not so much in the life sciences. I don't see a big difference. We all pretty much talk the same language. Most of my investments are West Coast or western-based, and so I probably tend to be more in that culture than I do in this culture. It’s interesting. Pitch Johnson was the guy — I sort of worked under his guidance — he was sort of the lead director, I guess, sort of the most influential guy on the Amgen board. So I kind of grew up watching how he behaved, what he did. He was a very calm guy, and I learned a lot from him. He was a westerner, so I’ve always kind of felt like my board behavior was like Pitch. And Pitch was, for the most part, a pretty good listener, but he had the ability to sit down afterwards with the CEO and summarize what the board concluded. And he was a very clear and concise communicator, but he always did it in a polite, behind-the-scenes kind of a way. So I learned a lot from him. I also learned a lot from Tommy Davis, who was on the Applied Biosystems board with me. I got to know him through that process. Going off and starting Domain, I had a lot of ideas about what I wanted to see in a firm and culture that we wanted to create. And Tommy was my role model. I always thought Mayfield, when Tommy was there, had one of the best cultures in their organization — and I admired his interactions with his limited partners and his belief in what a fair deal was. They never overpaid themselves. And that has been part of the Domain culture as well. And I think a lot of that's always been Tommy, and Tommy basically saying, "If you go out and do a good job in what you've done, you'll make plenty of money."

REFLECTIONS:

CK: *Do you see venture capitalism as a romantic quest in some way?*

JB: Well, that's hard. I tend to think it's more romantic from the outside than it is from the inside. One of my friends, Kevin Kinsella, has said, "Venture capital has a high barrier to entry, but it has a higher barrier to exit." And there's a lot to be said for that. And what he's saying is that basically when you're in it, you have ongoing responsibilities that go on and on and on. You commit to a ten-year role with these partnerships.. You can't sell your mistakes. If you're a public market manager and you've got to go out of business, you can sell your mistakes, and you can sell your fund and close the doors, okay? If you're in our business, you have to work through the mistakes.

I know some people in our business that have spent three and four years winding down the activities of their organization after they've decided to exit the business — they want to retire, or they want to go do something else. They're still busy for four or five years after they've made that decision. And the work is not glamorous. It's got a lot of grunt work, and it's a lot of unpleasantries. And so I probably am the wrong person to ask about glamour. I think if you asked somebody that's a young man graduating from Stanford Med School, or something like that, who has basically said, "I always wanted to be a venture capitalist," I think it's perceived to be very glamorous to him. After forty years of exposure to this business, I think it's a lot less glamorous than people make it out to be.

CK: *I wonder if in the life sciences there's a difference, as you said earlier, in that you're changing lives in a really dramatic way.*

JB: Yes, I think that's part of it. We probably get some of the same satisfaction that a physician gets when he knows he's done the right thing for his patient. You try to do the right things, and when it works out that you make a difference, it is a "feel good" business.

CK: *What continues to excite you and drive you in this industry?*

JB: When you see what science and technology can do to the practice of medicine today, it's extremely exciting, as is the pace at which new things can occur. The

VC industry can play a truly important role in making things move a lot faster than they might have. I'm on the Board of The Prostate Cancer Foundation, and I definitely get a charge at the pace with which they have been able to move both the science and the clinical development of new drugs for CaP along. And this translates well in what we're trying to accomplish in our broader investment arena.

CK: *How involved are you in the Prostate Cancer Foundation? And how did you get involved in that?*

JB: Quite involved. I had prostate cancer, and my treating physician was Mike Milken's treating physician. The Prostate Cancer Foundation is Mike's baby, and so when I got introduced to Mike, he dragged me into it and said, "You've got to get involved in this thing." And it's been fun.

CK: *One other early supporter that you mentioned is Ed Glassmeyer of Oak Investment Partners.*

JB: Well, when we got started, as a personal favor to me, Ed read our first investment memorandum for raising Domain I. He also went through our whole presentation. It's funny, because I was with Ed in the spring and I was reminding him of this.

He didn't even remember it. I said, "Hey now, Ed, you sat back, you read and you scribbled down, said, 'No, you've got to do this. This is wrong.'" I said, "I felt like I was a student at Princeton and I had the professor come and grade my paper." And basically he'd written all over the stuff and spent a lot of time doing it. I told him, "You didn't remember it, Ed, but it made a world of difference in the attitudes that we've taken." Now I'm teaching our newest people that when you're dialoguing with prospective new limited partners, there are three or four key questions that you have to get answers to. And if you've finished your meeting and didn't get the answers to those questions, you've failed in your job. And Ed says, "I did all that?" I said, "Yes." (Laughs) So, we laughed and joked, but he's been a good friend and an important player in our industry. So is Jim Swartz, whose morale and offer of financial support in the beginning made Domain a reality. And we remain grateful to Ed and Jim for helping us launch what has become a reasonably successful firm.

CK: *Chuck Newhall uses the term "band of brothers" in referring to these networks and relationships. I'm listening to you as you talk about some of these colleagues who have supported you and encouraged you. Would you use the term, "band of brothers?"*

JB: The term "band of brothers," for the record, comes from the Shakespearean play, Henry V. He gives one of the most inspirational speeches I've ever heard. And the essence of the speech is: "We few, we happy few, we band of brothers." Because they're going to go to war and half of them are going to die. It's a St. Crispin's thing. And so we have a group now, within the venture community, which we call St. Crispian's Society. It was all created in the '90s when a lot of our high-tech fund brothers were doing very, very well. They were doing very well, and the life science people were having trouble justifying their role within these diversified firms. And so we kind of all hung together and supported each other. So we refer to ourselves as a "band of brothers." I think St. Crispian's came out of our common experience in Athena Neurosciences. It kind of fanned out from that point. So, we call it the St. Crispian's Society.

CK: *You were a director of Athena Neurosciences?*

JB: Briefly, but actually, my partner, Brian Dovey, assumed that role and deserves all of the credit owing to Domain. When the company got sold to Elan, they were kind enough to give me a St. Crispian's clock!

CK: *This clock says: "Director from '87-'89. We few, we happy few, we band of brothers." How appropriate, and how nice to have that.*

JB: Yes. That was the genesis of the so-called St. Crispian's Society, which I mentioned earlier.

CK: *I also want to cite the NVCA Lifetime Achievement Award for Life Sciences, which was just awarded to you this past year. That's quite an honor to be recognized by your peers.*

JB: Well, obviously, I'm very pleased about the recognition, and I think the fact that they recognized four other good friends in the business was an important factor as well, because I think the thing we all know better than anybody is that while I may have been cited, you're nothing without the people you're working with, your colleagues, my colleagues at Domain. And so it's not a business of individual achievement; It's a business that requires the interactions of your partners and your colleagues in the business. And it's been a very collegial business, for the most part. Everybody that was named there were people that we've worked with — done deals with. Some were close friends, four of the five of us are members of the St. Crispian's Society; so, we're part of that. But all in all, it was a good experience. And you don't get honored for lifetime achievement without being old and lucky.

CK: *What are your future goals for Domain, and what do you want to see as your legacy here?*

JB: Well, I want to see it survive and thrive without me. There's some point in time when I'll be less active than I am now, and you want to see this thing continue to roll, you want to see the culture preserved, and you want to see it thrive in any kind of environment.

CK: *Do you think about retirement?*

JB: Not actively, no. I think of retirement in the context of slowing down and doing less; I like Coach John Wooden's comment to a recent interviewer who had started to ask him about some of Wooden's past experiences. Wooden, at age 98, said that he'd be pleased to talk about his plans for today or tomorrow, but not the past, because he believed that the day he started looking back was the day he would start to die.

CK: *I note that you're on the advisory boards at Princeton, Penn, USC, and Cal Tech.*

JB: Cal Tech's an emerging one, but yes. And those are not everyday kinds of things. That's a once-a-year kind of a commitment on the university's side. Not the Prostate Cancer Foundation. With the university advisory boards you sit down and go over the curricula, and you go over the programs, problems that the undergraduates might be facing, or that the graduate students might be facing. And actually, when you're involved with one or two — they're all complimentary, so they're not competitive — you start to see a lot of the same problems surface in different university settings, and your advice gets better.

CK: *What are you doing when you're not doing all of this?*

JB: Golfing. Walking, exercising, a lot of golfing, and travel. I like to travel, so taking some trips. I mentioned my old friend David Leathers; we vacation together for probably at least a week every year. Susan and I will go over and watch the end of Wimbledon together and then take a trip together. We've been doing that for the last few years. And we like to go skiing,—it's a nice family thing with all our family together. When you get to be my age, you have a lot of grandkids, and so you want to spend time with them.

CK: *Could we just take a minute and let's recognize your children and your wife Susan*

JB: I could spend all day on that stuff (laughter). Susan and I met early in my senior year at Princeton, and my sister Alice fixed us up on a blind date. Two weeks after we met, we knew we were going to be married. And that's pretty good when you consider we weren't on the same campus together; we just kind of hit it off and had common interests. We were good pals then, and we remain good pals to this day. And she's a fine golfer — a better golfer than I am. And so, as a result, golf is my principal non-working avocation — being on the golf course is something we can do together, and it means a lot to both of us to be able to have time together. But kind of turning the clock back, we married immediately after Princeton, 1961. Had Debbie in '62, Lisa in '65. They both went to the public schools in Princeton. Debbie went to Sweetbriar in Virginia, and she was a Division III Lacrosse All-American there. I think it was a great college choice for her. She was class president and did very well there. She married her high school sweetie, John Forrey who, until about three years ago, worked on Wall Street for Merrill Lynch. At Merrill, he was a fixed-income investment research specialist. In 2006 he decided to take some time off and perhaps prepare for a new career and spend more time with his kids, who were then secondary school age. Alex just finished his sophomore year at Yale, and Jim finished his senior year at Deerfield Academy. And then Rob is their third son, and he has just finished his sophomore year at Glenrock High School in Northern New Jersey. John's back working in an entrepreneurial situation now, where he's essentially the chief operating officer for a start-up company in the education field — which is kind of where he wanted to redirect his life — in New York. And so we're excited about the prospects that he has getting back into the workforce, particularly as the kids have moved along.

Lisa stayed in Princeton and went to Princeton University and after that worked for Bristol-Myers Squibb for five years, getting her MBA and CPA at NYU. When she got her CPA, she joined Price Waterhouse, and then moved on to Deloitte & Touche in San Francisco. She had a first marriage that didn't work out — met a great guy — Kurt Hovan — that generated her move to San Francisco, where she remarried, and she now has three kids that are nine, eight, and six. The nine-year-old, Jenna, and the six-year-old, Gracie, are athletic girls, and the eight-year-old, Kurt, Jr, is a guy with a wide range of interests. So, Susan and I have four grandsons and two granddaughters, a nice combination of both Lisa continues as a CPA and does a lot of tax work, not for Deloitte & Touche anymore, but for individuals. Kurt was also a Princeton guy that's a couple years younger than she is. He has a money management firm in California that has a specialized fund product that's more complicated than I want to get into. But effectively, it purports to never go down in the market, and so far it's worked out pretty well for them. They live in the Belvedere, Tiburon area. So, when we're out west, we get to see Lisa and Kurt. And then in the summer, we do a family reunion in Avalon, New Jersey, at Debbie's house in Avalon. Lisa and Kurt come with their kids, and then Susan's sister and brother-in-law come with their two kids and their families. So, we have about twenty-two people pile into Avalon for a week, the third weekend in July every year. It's good fun, a lot of good laughs and a lot of good family ties.

And as I said, we have a condo in Utah where Susan and I — I think we bought it in the same community that Jim Swartz lived in back in 1987. The whole gang comes for the Christmas/New Year's period, and then we have time during President's week that Lisa and Kurt and the little kids come and do ski lessons. So, we get to ski with them, and so it's a great way to spend time together as a family. And then Susan and I do a fair amount of traveling with friends. Chuck and Amy Newhall have been good pals to travel with. And I have a classmate — Ted and Carole Newlin — that we've included, so we call ourselves the "Magnificent Six" and go to different places around the world. We tell them they've got to set the table and reflect the quality of the group by "Magnificent Six" plates.(laughs) We have a lot of fun going to different places together.

At this time in our lives we start worrying about the human legacy that we are going to leave to our children and grandchildren: We've learned that it probably comes down to endowing our offspring with the right Virtues, as opposed to Values. What's the difference between values and virtues? Virtues are the things that you can reasonably expect to pass down through generations and expect that they would survive. Those are things like honesty, integrity, faithfulness, tolerance, being concerned for people around you etc —qualities that are very important, and I think they were highlighted by both Susan's parents and my own.

So far, I think we've been fortunate in being able to pass those through to our own kids.

Values are generational, because values are related to questions such as how long you wear your hair, do you wear a necktie to work — things that my father's generation stressed. Our generation's a bit more relaxed on that topic. We may be bouncing back as our values begin to shift. Your values will shift generationally and over time, even within your own choice of music or things of this nature. But both Susan and I had parents that took life's essential virtues and stressed the importance of those in our life, well above values.

Usually the arguments you have with your parents are about values ("no tattoos", "no earrings", "cut your hair", etc.), but when you start arguing about the absence of important virtues, then your relationship goes on a different setting. So, the thing we're trying to pass through to our grandkids is the importance of the virtues that are not generational; they're for a lifetime. I think we're doing a reasonably good job of it. So, that's maybe our little family summary there.

CK: *Is there anything that I've missed that you would like to add?*

JB: There are things I could talk about, in terms of our firm's philosophy.

CK: *I would like to hear that.*

JB: Generally speaking, we try to be guided by certain truisms. For example: One needs to understand that in the venture business, one tends to think that public markets don't affect our markets because we're making private investments and the like. But public markets are the backbone of our business. Ultimately, we have to have a source of liquidity for the things we're investing in. And historically, the public markets have primarily been that source. We have a situation in the next five to seven years, where the major pharmaceutical industry — and some of the major device companies to a lesser extent — have pipeline holes, where they don't have products coming out of their own research. And they have to reach into our portfolios to do that.

So, I think we're going to have a decent source of liquidity in a five-year period. But you have to understand in our business that if you don't have good public markets, you're probably going to have a very tough time. We can't fix the public marketplace, but we've got to be mindful of what goes on in public markets to anticipate what our companies need to have achieved when the markets start to provide a source of liquidity once again. Another part of our mantra is that when we have outstanding portfolio companies, we like to "ride our winners hard." We like to take the companies that are succeeding for us and pour more fuel into them and support them as best we can. Conversely, "we go ugly early." If we have companies that aren't doing so well, we try to identify what the flaws are, and if they are likely to be fatal flaws, we cut our losses short and move on. Now, that's a relatively difficult process in our business, because the easiest thing to do is to keep supporting something.

And it's very much like the employee that's struggling and not really faring very well, and you're not honest with them about, "You're not going to make it." We try to do that within our own organization. If you're not going to make it, you're going to hear about it. The young ones always want to know, "How am I doing?" I say, "If you're not doing well, you won't be here very long, okay?" And that's not quite the answer they're looking for, but I think you have to tell people what they're doing right, and you have to tell people what they're doing wrong. And if you don't think they can get it a lot more right than wrong, you have to move them along. So, that's how you treat the people, but it's also how you treat your portfolio companies. If they're not getting it done, there's no reason for you to continue to support it. And you have to be effective in communicating that, so we use the term "going ugly early." We try to instill that philosophy in how our people think about what we're working on.

CK: *Considering your relationship with the entrepreneurs, that must be quite difficult.*

JB: Yes, sure it's difficult. But I would say this: My epitaph will say something like: "I didn't always like what I heard from Jim, but I always knew how he felt." I'm not saying I am a jerk about delivering the bad news. We simply and honestly lay the cards on the table and say, "This is what we're looking at. This is not going well, and it doesn't look like we're going to get well."

CK: *Have you ever been on the other side of that?*

JB: Oh, sure, all the time. That goes back to the conversation about the coach sort of sitting there and saying he's not going to praise you; he's going to tell you what you're doing wrong, and it shouldn't be difficult to hear. If you're having trouble hearing the criticism, if it's constructive criticism — if you tell somebody their breath is bad, they can go brush their teeth, but if you tell somebody that they're ugly, they can't fix that. And so you can't tell people they're ugly; you've got to tell them, "Try to fix this, or try to fix that." But if you think they're ugly, you need to move them aside and move along.

Now, sometimes you sit there and you go through a developing business model, and that sort of provokes the process of what do you do to fix things. Is there a piece of technology we could acquire that would change the outlook for this, yes or no? And so you go through the whole thing: What will it take to salvage this thing? And you've got to have those dialogues. You've got to do it early; you can't sort of wait. One of the corollary phrases you hear is: "Nobody fired a CEO too early." So, you ride your winners hard, and you go ugly early. But I think the other thing is, is when you're in times like we're in right now, you have to kind of look beyond the chasm to see — what's going to be popular. When we come out of the doldrums, wherever we might be, what is it that people are going to be looking for beyond the depression— the situation that we see ourselves in? There's a temptation to look — at times like this when values are low — and say, "You can put your money anyplace and they're going to go up." That's not the case. You've got to know what people are going to buy beyond that. So, this is where the stock-picking experience comes in.

During my Wall Street days in the 1970's, I worked with a guy who was a considered to be a very good stock market strategist. When I got to know him, I thought, Gee, he doesn't really have anything original; he goes around and talks to the portfolio managers all over the country, and all he does is come back and tell people what he heard. And then I started to realize that what he did was actually pretty damn valuable, because he personally didn't have any buying power, so telling you what he thought you ought to buy didn't mean anything. But the people that have the buying power, you want to know what they're going to buy. You want to know what they're looking for. You want to know what they're not looking for, whatever that might be. And so, being in touch with your ultimate sources of liquidity on a continuing basis and say, What is it they're looking for? What is it they want to see? And understanding that we don't have three days to repair it; we've got to think in the context of what are they going to be looking for in two or three years and shape our company so that they are going to have some appeal for those guys downstream. So, you've got to look and anticipate where people want to be at some point in time.

Finally, and I think this has characterized everything we've done, and I'll make this sort of my closing remarks: We build real value. We've never tried to do anything that is promotionally attractive and basically looks like a hot idea. That's one of the reasons I can't get totally enamored by clean tech, or some of these areas that I think are fads; they're not going to be life-changing in any way, shape, or form. Those are trends and those are faddish, okay, so those will disappear in terms of being an important sector of our economic growth. So we will continue to concentrate on building real value, because in the end, if you haven't done so you don't have a shot. There's never been a bubble in what we're creating, and that may be for better or worse, but for us it's the only way we know how to do it.

CK: *I want to thank you for being so generous with your time. I've enjoyed talking with you and learning from you. And I certainly want to thank you for Chuck Newhall who has spear-headed this project.*

JB: Well, thank you for spending the time and coming out here.