



## **Oral History of Chuck Newhall**

Interviewed by:  
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**Hancock:** All right. Today is September 26<sup>th</sup>, 2017. My name is Marguerite Gong Hancock of the Computer History Museum, and I'm sitting here with Chuck Newhall in your home. Thank you, Chuck, for welcoming us here. We're honored and grateful to be able to interview you for the museum. We'd like to begin your story with your family and its influences on you. Take us back to the beginning of your family and its role in technology and the essential influences on your life.

**Newhall:** So let me begin the story with World War II, and there were a bunch of people in World War II. Charlie Dyson, Laurance Rockefeller, General Georges Doriot, and of course General Draper, although he was more on the fighting side. But these people basically had responsibility for the American economy. My father ran the development, production and allocation of fighter aircraft. At least he was key in that. Doriot, when World War II started, the average foot size for a pedal on a tank was a size six. The average foot size of someone who drove a tank was size nine, so he totally changed the structure of tanks. They got tractor families to make armored personnel vehicles or tanks overnight. They took women into the workforce because the men were mostly fighting, and they basically won the war because they were providing the supplies, which ultimately won the war. I think there was more innovation to occur in World War II than there was in the prior 1500 years.

And that great rush of creativity spawned a lot of venture capital firms. Like Laurance Rockefeller, Venrock, and my father was in the middle of it. His first deal, which I have a record of on my desk over there, Laurance Rockefeller got a call at 3:00 A.M. from the Secretary of War and the Secretary of War said, "I'm calling at the request of the President and there's a company that goes bankrupt tomorrow in Morristown, New Jersey, and if you don't finance it, the future of the United States is in great jeopardy." So, Laurance called father, and he goes down with a check for \$300, \$400,000, which was big money in the day, and he goes into a bank where they're foreclosing in this company and it was really a bunch of German scientists, Wernher von Braun and the V-2 crew. And they came to the United States to make up for the V-2 rockets and create the aerospace industry in this country.

So, Reaction Motors was funded. My father not only participated in the investment decision, but after that, he went into the workout phase of the venture capital business, so he became sort of the chief operating officer. The company was merged into Thiokol and this was the company I saw, met, Chuck Yeager when I was growing up and the Bell X-1 was his plane. The Viking Rocket, which was the first rocket to take a living organism into space, and Thiokol, in my mind, has put the man on the moon. It's created the aerospace industry and it'll ultimately send people to Mars.

So I asked my father, and he wasn't particularly good at this, what the venture capital business was about, and he has said, "Our job is to know the future. Not what is now going on or what has gone on, but we must anticipate and create the future," and that really got me as a young person, because later I would meet Laurance Rockefeller, who was very inspirational to me, and George Doriot. And you have to remember that a lot of these venture firms came out of World War II technology. Now, the venture

business goes back thousands of years, which I'll go into later, but this was the introduction for my family to the business.

I started NEA along with Dick Kramlich and Frank Bonsal. We began fundraising in really March of '77 and we closed the fund in June of '78. My son has started Greenspring Associates, which now has about six billion under management and it's 50 percent fund-of-funds and 50 percent direct. So of my boys, my Adaire, helped to start two biopharm companies, with a man by the name of John Spitznagel, who's a legend in the specialty pharmaceutical business. And then he went to Darden, went to Domain, a great healthcare venture capital firm, and now we're all three working together, which is probably the greatest achievement of my life. Because my first wife shot herself when the boys were three and six and we were told they had a 95 percent chance of ending up in jail. But thanks to my second wife, they didn't, and they became venture capitalists. Again, it's sort of like the women in World War II. They made the soup.

<laughter>

**Hancock:** So thank you for that overview of your three generations, almost a hundred year span history of venture capital here in the United States. I'd like, if it's all right with you, to go back to your story just for the record about when and where you were born and your early life and how that launched you. What was your--

**Newhall:** Certainly. Well, my father was a venture capitalist and he-- my mother supported him totally and he didn't really have much time for me as a child, so he gave me to my grandmother, who was the greatest influence in my life. An incredible woman. Artistic. She was the headmistress of Shattuck School, a school that my family had been involved with since 1876. Behind us is Captain Asa T. Abbott, a hero of the Civil War, and he went there as military commandant in 1876. My mother, my grandmother, thought she'd bubble wrap my father and had raised him in an environment that was too general for what you have to face as a venture capitalist, so he didn't, she didn't, bubble wrap me. She sent me to a military boarding school when I was eight. When I was 13, basically this school taught me three of the most important lessons in life, but it was a hard, hard place. It was a West Point for 12-year-olds. For example, I got a package when I was around 12, and seniors followed me back to the house, or to my dorm room. They confiscated the package and whipped me with a wire coat-hanger, but, you know, that was a lesson. Whatever-- after that I didn't turn them in and what they were teaching me is what I quote Forrest Gump, "Shit happens."

**Hancock:** <laughs>

**Newhall:** And shit happens, believe me, in the venture capital business. They also taught me what the Band of Brothers was, and they taught me how to have three plans every day. One if the enemy comes

from the front; one if the enemy comes from the rear; one if the enemy comes from the sides. I don't have this quote correct. I think it was Bob Moore, who said, "Behind every man, there's a paranoid brain."

**Hancock:** <laughs>

**Newhall:** And being in the military really makes you paranoid, because you're-- I still do this today. I, you know, have suffered from post-traumatic stress disorder, and so I'm still looking for ambushes, and I was very-- how did this help me?

**Hancock:** Well, before we get to how did this help you, I want to just spend a little more time. You said something striking, that your grandmother was the most important influence on your life, and I believe her name was Ev--

**Newhall:** Evangeline.

**Hancock:** Evangeline Abbott Newhall; is that right?

**Newhall:** Mm-hm.

**Hancock:** Could you say a little bit more about why she was so important and how she influenced you?

**Newhall:** Well, one, she made me into a warrior, and she wanted me to be like Captain Abbott, and Captain Abbott lived through all the major battles in the Civil War. So when I went to Vietnam, she said, "Come back with your honor or don't come back." She took that from the Spartan Mother, who said, "Come back with your shield--or upon it."

And so she was the one who put me in an environment where I learned the three lessons: Band of Brothers, always have a plan, and shit happens. And I can't thank her enough for that. Now, that's very-- and I'm paranoid, because I'm always thinking about what could go wrong with my companies, and she just was artistic. She developed my interest in the arts, in animals, in gardening. She touched all the bases. She was a renaissance woman who underneath it was very tough. Her mother used to shoot Lakota Sioux Indians when my great-grandfather was fighting them. She shot the hat off a burglar. It was much better than a burglar alarm.

**Hancock:** <laughs>

**Newhall:** So tough, loving, gentle. What a woman.

**Hancock:** With this experience with your grandmother and your time at Shattuck, then you decided to go to--

<off-topic conversation>

**Hancock:** In your book, you talk about the last time that you were with your grandmother, the last time I believe you saw her and she gave you the copy of that book.

**Newhall:** "Epictetus"

**Hancock:** "Epictetus," the same one that your--

**Newhall:** Stoic. Seneca was a stoic too, and so throughout my life I've been a stoic, which means you don't show your emotions. I have what I call my Army voice, which is devoid of emotion. And you really try not to let your emotions control your actions, and that too has been a great lesson. And my grandmother was a stoic as well.

**Hancock:** Hm. So as--

**Newhall:** Very good when you have a company going bankrupt.

<laughter>

**Newhall:** And you want to kill the CEO but can't.

<laughter>

**Hancock:** That probably happened more than once or twice, didn't it? <laughs>

**Newhall:** Oh, I could tell you stories about that forever.

**Hancock:** Well, let's get to that, but I first want to ask about your experiences at Penn. So you finished at Shattuck and then how did you decide where you wanted to go to university and your focus?

**Newhall:** Well, I wanted to go to Princeton or Harvard or Yale, but I couldn't get in. Thank God. I got into Penn, and my board scores were terrible. All Newhalls had bad board scores. Like 580, and for English and math, and I guess-- and I think now the average board score at Penn is around 787 or some ridiculous number. But I went there and I took an achievement test and I was exempted from the first two years. Not in science or math, but in everything else. History, literature, language, and so I went into graduate courses in my freshman year. First assignment was to read "The Iliad," "The Odyssey" in Greek, in the first week, and--

**Hancock:** Now, had you--

**Newhall:** --I couldn't do that, so they gave me a undergraduate exemption and I read them in English as I read "Diodorus of Sicily" and all the other great Greek books. But that was the type of place. Now, I was also in the Special Forces when I went to Penn. So if you can imagine, I'd be walking around with a green beret, jump boots, a knife in my boot, which is on the wall behind you, and that's actually a copy because my real knife was stolen, and I carried it in Vietnam and I'd go by all these protests, and it was an interesting event or interesting <laughs> way to grow up.

**Hancock:** <laughs> It's hard for me to have both parts of that picture in mind, that you're studying the classics in Greek and walking around with your--

**Newhall:** Knife.

**Hancock:** Your knife. How did you reconcile those parts of your life or integrate them or how did those balance such a--

**Newhall:** Well, a lot of warriors were poets, and I've always been in love with the arts, and I'm a very poor artist. <laughs> But I was taking a course in sculpture. Quite unusual for someone dressed in a ranger uniform, and I was making a very dirty picture of a couple making love, which was on my mind. But it was a realistic sculpture, and this guy came up beside me and he was wearing blue jeans and a nice open-collar shirt and he said, "You know, you can do this," and he pointed at my abominable work of art. "But you can't do it for a living."

**Hancock:** <laughs>

**Newhall:** “And I would suggest giving up all pretense to being an artist and focus on buying what you love that is artistic.” And so that, along with my grandmother and the people I met when I went to Harvard Business School, because we were adopted by the Cabots, the Lodges, the Lowells, and Harvard taught me how to be a businessman and they taught me how to enjoy life. But it was a recurring theme throughout my life, and I’ve expressed my art in the gardens I’ve built and in the books I’m writing, which are four. Two of which have been written, third is almost completely finished.

**Hancock:** Let’s talk about those books. You majored in English, if that’s right, and we’ll return to your books later, but could you tell us the titles and short summary of each of the four books, since you just mentioned them?

**Newhall:** The first one is “Fearful Odds.” It comes from a quote from Macaulay. “A man cannot die better than facing fearful odds, for the ashes of his fathers and the temples of his Gods.” And it’s about growing up in the military, having a military mindset, volunteering five times for Vietnam, pulling strings to go there, only to discover that war is not what Hemingway described. Because I was a romantic in love with Hemingway. But that taught me, in essence, the lessons that would, I would find useful, in the venture capital business. So, I had PTSD that was exaggerated by my first wife’s suicide, and I went back to Vietnam, and I’ve had four other crises as a venture capitalist that put me back in Vietnam.

So how did I quote, “cope” with this? Well, the book is “Brightside Gardens--A Dialogue Between the Head and the Heart.” The name of the dialogue comes from Thomas Jefferson. Greatest love affair in his life [was] with the wife of [Richard Cosway], Maria Cosway, who was scandalous, but no one knew it. It’s basically about how the heart says one thing, the head says another. In my garden, it’s a very intellectual garden, but it’s also the garden of the heart. So I think my wife, Amy, was the heart of the garden and I was the head, and we fought like cats and dogs.

My third book is “Dare Disturb the Universe,” which comes from a quote from T.S. Eliot. “In a room where women come and go, talking of Michelangelo, do I care? Do I dare disturb the universe?” And this is the story of my family’s eventually to be hundred years in venture capital, and it’s not a book that’s your typical venture capitalist book. It’s not bragging about great deals, but it’s trying to convey what a venture capitalist does for a company. I start the book off with the story of UUNET and how my partner, Peter Barris, hires the CEO. He brings in the three top management. He does a company-making deal with Microsoft, which allows them to finance not with their equity or debt but with Microsoft’s. The company eventually gained 70 percent of the traffic that went over the Internet and John Sidgmore, the CEO, was the rock star of the internet and a great human being. His employees used to wear T-shirts, some of them did, when they had company meetings, that said, “I love John Sidgmore.”

**Hancock:** <laughs>

**Newhall:** Well, of course, NFS, I think that was the company, buys UUNET and it, six months later, three months later, it is sold to WorldCom. So John has this great entrepreneurial company and he feels loyalty to the employees. He goes off and starts another company but stays on the WorldCom board. You know, his wife, when he went back on the board, said, "This will kill you," and he said, "Well, I have an obligation to my employees, and I want to save this company." He couldn't. He took to drinking a little bit more than he should. He got an infection. Three days, dead.

When he was buried, it snowed like three feet in Washington, but 800 people came to his funeral. So, I want to show that, in this book, that entrepreneurship is great sacrifice. The only career I can compare it to is that of a warrior, and it's crucial. It's not 17 percent of the American economy. It's 80 percent, as I'll go into later. And if we destroy the goose that lays the golden egg, if we destroy the alignment between venture capitalists, the limited partners and the entrepreneur... Right now we don't get salaries. We have to repay our salaries alone with interest, and we live off of capital gains alone, which is what our limited partners want, and the entrepreneurs live off that, and I really think it's important to maintain capital gains interest. I think it's important to show the world that venture capital is the driver of the American economy. We're a tiny little business. I guess there are 6,000 active now. You probably know more than I do. But we really shaped things.

**Hancock:** That's why we're so grateful to be talking to you. I share that value for what the industry has done in shaping the economy. So you mentioned--

**Newhall:** More than the economy.

**Hancock:** Well--

**Newhall:** The internet freed women to work at home.

**Hancock:** All of the technologies. Right.

**Newhall:** The internet made it more difficult for dictators to keep their people uninformed. So social change as well as economic change.

**Hancock:** Absolutely. So I was just going to ask you about your fourth book, which you haven't mentioned. Then we'll get back to your time at Harvard.

**Newhall:** Well, the garden book's a coping mechanism for PTSD, and what's around you in this office, which has been-- I started collecting when I was 14, and I'm of a disease called horrors vacui, which is



fear of empty spaces, and so it's not a way of decorating that is now in fashion, but it's one that makes me comfortable, and it has been-- so when I would be worried about one of my companies going bankrupt, what I'd do is grab an auction catalog.

**Hancock:** <laughs>

**Newhall:** I'd take a walk in the garden. It wasn't a casual thing. It was a very deliberate move by me and I knew what I was doing, and so the fourth book is "Remembrances of Things Past."

**Hancock:** Hm. Well, thank you, and we'll come back to those and later in the conversation I'd like to go back to our chronological timeline and we've-- you've now finished at Penn and you're looking at what comes next, and I think you turned to Harvard.

**Newhall:** The Army, of course.

**Hancock:** Yeah.

**Newhall:** And so I go to Fort Polk, Louisiana. But I was airborne qualified, jungle war qualified, Special Forces qualified, small weapons qualified, and I went in the Army to fight, not teach young men, although I love teaching young men, and a number of them have stayed in touch with me. Like, all the photographs came from the young men that I taught basic training to because they became Army photograph, photographers. So I volunteer five times. My father, as I mentioned, was a whiz kid in World War II, a bird colonel. He knew everyone. I told him I wanted to be in Vietnam in a week and he called his friend, General Estes, a four-star general commander of MATS, and I was there in a week, and eight days later I was going up the Dong So ridgeline, which was the reconnaissance of a battle that would later be called Hamburger Hill. It was the battle that changed the war, because after Hamburger Hill, there was so much objection to it. Even though it cut off the highway that the North had used going South, and we discovered 68 2 1/2-ton trucks when we went into that valley. But according to our politicians, it was a useless waste of life, and...

**Hancock:** So, you've chronicled in great detail in a very moving account, your memoir of being in Vietnam. So I'll let that record stand for itself, but I would like to ask you for this conversation. What you brought away from that that then you, that you drew into your life as a venture capitalist?

**Newhall:** Remember shit happens, and always have a plan. So I helped start this company called HealthSouth in Birmingham, Alabama. I probably became one of the most influential board members in that company. Its mission was to solve the problem of healthcare. We had an integrated delivery system where we could combine radiology or diagnostics, primary care, surgery, and really do what a hospital

did. We were very much aware of how device technology was moving all outpatient. I think ultimately open-heart surgery will be an outpatient. So the vision was to build a company that could do 80 percent of what a hospital could do. Except when I went to Johns Hopkins I encountered 40 employees, two of which were caregivers. When you went to HealthSouth, you encountered four employees, two of which were healthcare givers. I believe in this company's mission. We grew 25, 30 percent a year for 20 years. But it turned out that this entrepreneur, who I thought was really an extraordinary human being, was a crook, and he'd conspired with about 40 people in the company, the financial officers, to do what I call capitalizing ice cream. Putting it in the balance sheet rather than the expense category. So they just hired new lawyers and the lawyers said, "I won't go--" what the law firm's name was, but it was something like Crook, Scalawag and--

**Hancock:** <laughs>

**Newhall:** Anyway, they later charged us a half billion dollars for legal fees for the company. They told us we had to put the company in Chapter 11. The board was really led by Joel Gordon, who was the founder of the surgery center business, and we all worked together to try to save the company. But we asked the lawyers to leave the room, and they asked me and a good friend from Ascend Communications, Betsy Atkinson, to find someone who could really tell us where we were. Now, I'd known the firm Alvarez Marsal, so within a week, I had Bryan Marsal down there. In another week, he said, "We have \$65 million of EBITDA, and if you would put this company into bankruptcy, you should be going to jail." So that was an example of how having a plan, because I had a plan. What happens if one of my companies get in trouble? I call George Sansone and Ryan-- anyway, and we went on to save the company. We had to sell off the dream of the integrated delivery system, but we ended up at the hospital. We brought in a guy who's rebuilt the company, and the stock is now in the mid-forties, 20 or 30 percent over the high of HealthSouth stock 10 years ago. So that was how the military training enabled me to survive what was a traumatic event for me. Because I knew I would've spent 25, 30 days a year on this company and I knew 300 people and there were people that shot themselves and... But again, being in the venture business is being a warrior but you're fighting a war, not to defeat another country but to build a company that changes the way the world is.

**Hancock:** That-- you mentioned there were four traumas. That was one of them.

**Newhall:** I'm not going to go into all of them.

**Hancock:** Okay.

**Newhall:** <laughs>

**Hancock:** That's fine.

**Newhall:** But HealthSouth was one.

**Hancock:** That's a--

**Newhall:** Leaving NEA was another, because, you know, it was my baby, and huh-uh.

**Hancock:** Was that 2000--

**Newhall:** Ten. Two thousand twelve was when I--

**Hancock:** 2012.

**Newhall:** But I really sort of was part-time and from 2010 on.

**Hancock:** Mm-hm.

**Newhall:** But, you know, things turn out for the best. When we first started NEA, I tried to get a guy named Warren Catlin to be my partner. He was at Payson & Trask. Joan Payson's venture firm. That didn't work, so I tried Jim Morgan at AR&D. That didn't work. He dropped out when -- but that was the best thing that ever happened, because Frank and I were not big deals, but Dick Kramlich was a big deal, and bringing him into the partnership really was what made NEA's long-term investment success. So bad things happen. So I leave NEA and I go to work with my son, and that's an epitome of what a father could hope for or aspire to and that's why I say my children are the greatest accomplishment, or our children.

**Hancock:** Yes. Well, we've mentioned the beginning of NEA and we'd like to talk about that, but first can you talk about your work at T. Rowe Price and your beginning there? How you started-- well, I guess we missed Harvard. We better talk about your time at Harvard.

**Newhall:** So I went into Harvard and they had this course, "Making Decisions Under Uncertainty," or something. It was a statistics course in a disguise, and they had mathematical ways of deciding whether you would invest in a company. I thought that was total bullshit. Excuse me.

**Hancock:** <laughs>

**Newhall:** And so my father knew everyone in the venture capital business, and my thesis was "Financing Change--The Role of Venture Capital in the American Economy." I knew, met, everyone. So Peter Crisp, Georges Doriot, you name it, and I went around and I interviewed them for two hours, and then wrote a thesis on what really happens when you are trying to build a company.

**Hancock:** How was that received, your thesis?

**Newhall:** I graduated with honors -- but it's not published.

<laughter>

**Newhall:** And that's the only way I acknowledge receipt, and/or received. So I then worked for Cub Harvey at T. Rowe Price. He ran the New Horizons fund. This was right before the energy crisis, and I went in there with the idea of getting T. Rowe Price into the venture capital business. Of course the great crash occurred, with the oil crashes, around 1975. In 1975, I believe, venture-backed companies raised 16 million dollars all for them, in public markets. Quite a difference from today. But Cub had introduced me, because the New Horizons fund bought the output of all the venture capital funds, to Dick Kramlich and everybody else in the industry. So I probably knew a hundred venture capitalists out of three or four hundred at that point in time. I worked and I studied the industry. When T. Rowe Price wouldn't go ahead because they were using all their earnings to buy out founders, they couldn't go into the venture business. I got the idea of starting a venture firm, because one of my future partners introduced me to the Deere family, and they committed \$4.5M, and T. Rowe Price committed \$1M, which happened to be 17 percent of the firm's net worth at that time. And then we went away and raised, over a year, another \$16M and we were in bus-- or no. Excuse me. All in total we raised \$16M and that was NEA-1. By the way, we were stupid and we took all the money down in the first day, and had we had just-in-time financings, our IRR would've gone from 37 percent to a couple-- a hundred to two hundred percent.

<laughter>

**Newhall:** Our biggest investment loss in NEA-1 was because we thought we knew something about bonds and we put some money in bonds and that was our biggest investment loss. So, stick to your knitting in the venture business.

<laughter>

**Hancock:** Good lesson. So could you say a little bit more about you bringing the team together? It was maybe a little unlikely for two people here in Balt-- how did you-- you knew Frank and then-- but then how did you connect with Dick?

**Newhall:** Well, Dick, of course-- I'd been trying to get a job with Dick for four years, and, you know, he was tied up with Arthur [Rock] economically and everything else and said, "We're not going to bring on an associate, so I can't do that." Now, Frank was my first wife's cousin and the way I got to know Frank was T. Rowe Price invested in a deal called Terminal Communications, which made terminals for IBM computers. The guy who ran it ran IBM's terminal business. And so I go to board meetings with Kirk, and Frank Bonsal is invested and is also there. So Kirk asked me to analyze Terminal Communications. I do. It's not a favorable report, and Frank says to Kirk, "Kirk, why did you bring that young, ignorant puppy here? He doesn't know anything."

<laughter>

**Newhall:** "Have him shut his mouth." But you see, Frank and I loved the same things, which was small companies, and so we started working together. I remember going to Rolm Computer, which was just then getting into the PBX market as well as it made the computers that helped win Vietnam. We couldn't invest, because we didn't have a pool company. Greylock did. I think Rolm sold for a billion and a half dollars, which was money in the '70s. So that's how I got Frank involved, and did it. We kept working on and working on, and eventually he said, "Yes," and we went off and completed the fundraising. But I must tell you how we celebrated.

**Hancock:** Tell me.

**Newhall:** So, Frank and I fly out to California, and we want to go have a beer to celebrate the founding of NEA, and so we go in this bar. Someone spent millions of dollars on it. Carved wood. Carved wood there, and there were two very attractive ladies sitting at the bar, so Dick and I go off to a booth and have a beer. Frank goes to the ladies. Well, it turns out, the bar is exclusively for transgender people.

**Hancock:** <laughs>

**Newhall:** And Frank is approached by one of these ladies, <laughs> and so we run out of the bar, because this was 1977 or early '78. We really didn't-- that wasn't within our realm of experience, and so we get to Dick's car. He's locked the keys in the car.

**Hancock:** Oh, no. <laughs>

**Newhall:** And--

**Hancock:** Oh, no.

**Newhall:** --so we call Lynn, his wife, who is a marvelous lady, and she comes down and picks us up, opens the car door and says, "How are you boys going to pick companies that are real winners when you can't even pick a bar?"

<laughter>

**Newhall:** "I knew this bar was that way. I have nothing against transgender people, but it's really not our bag, so get out there in Silicon Valley and do some work."

<laughter>

**Newhall:** She laughed at us the whole night and that was our victory dinner.

**Hancock:** That was your victory dinner.

<laughter>

**Hancock:** Well, that's quite a beginning. Tell me, what's the origin of the name for the company?

**Newhall:** Well, my father's first public company was, I mentioned, Reaction Motors, which became Thiokol, and Doriot invested in that, and that was his first big gain. So I tried to get a job with AR&D and was told that English majors need not apply, although Doriot went on to be my mentor. Much as he was Dick's mentor. Not as close as it was with Dick. He never said I was one of his students. But we hired Dick Testa, and Dick Testa was one of the most incredible lawyers. He created the legal aspect of the venture capital business. When we started he said, "If you don't raise your money, you don't pay me a cent. But if you raise your money-- and I'll never give you a purchase agreement that is over 30 pages and it will always be in English." And lo and behold, we're thinking of a name and I get a letter from Georges Doriot, and it said, "Chuck, I could've been wrong about English majors, but what I'm going to do is give you my name, New Enterprise Associates," which was the name I was going to call American Research and Development.

**Hancock:** Hm. Well, I think he decided that you were just fine then.

<laughter>

**Hancock:** Do you want to say more about he was such an influential figure as a mentor and in starting the industry? Do you want to say more of anything else about your interaction with Doriot?

**Newhall:** Well, I write about-- when I talk about why venture capital matters, I talk about Georges Doriot and Laurance Rockefeller, and so I was an AR&D groupie. I'd go to their annual meetings and hear his stories, and he would, you know, talk to me and tell me, "Our job is to see the future. Not what is, or not what is past." He was full of little short sentences like that that conveyed the whole essence of what a venture capitalist does. So, I read about AR&D. I read about Cortis. I read about DEC. I studied Digital Equipment. You know, when he proposed that to the AR&D board, he said it was a manufacturer of business equipment, because none of his board members would've voted for a minicomputer company, because IBM ruled the world. He taught me things like that too. He taught me whenever you meet someone, you've got a three-by-five card and you write what wine they like, what are their interests, what's their business. You keep these in a big rolodex and whenever you run into someone, again, you pull out the file card and you can resume the conversation where you left off five years before.

**Hancock:** Hm. Did you do those? Did you do that in practice?

**Newhall:** I tried, but it got too-- I got lazy.

**Hancock:** <laughs>

**Newhall:** But my memory at that time was pretty good.

**Hancock:** Mm-hm. So, he wished you well as you began and so you were off and running. At the time though, Baltimore was not a natural place to start a venture fund. It was early days. Can you describe the industry landscape here as well as what was happening in the United States?

**Newhall:** Well, there're around three to four hundred venture folks nationwide. A lot of them were family offices. A couple like Ned Heizer were institutional, and it was a little Band of Brothers. I mean, it wasn't competitive in nature, it was cooperation. For the most part. I don't mean to overstate that, but that was another thing Doriot taught me. Always know who you're investing with, because board of directors often ruin companies, not managements. By fighting and having their self-interest come before the company's interest, and so, excuse me. I lost my train of thought.

**Hancock:** We were-- sure. We were just asking about the landscape.

**Newhall:** Okay.

**Hancock:** When NEA came on there, what was in Baltimore and also across the United States?

**Newhall:** So an hour and a half without traffic north and south of Baltimore. There were four venture capital firms. Data Science Ventures, Allied Capital, Brow [ph?] Venture. Four firms. Venture-backed companies in the Mid-Atlantic got about a quarter of venture capital money coming in to the Mid-Atlantic. So it was nowhere, and Dick had told me, you know, "You should come out and live in San Francisco, because, you see, I can go to three board meetings in one day and it takes you three days to get to Parkersburg, West Virginia, and back. God help you if there's snow, and I can be so much more productive than you." I said, "That's interesting, Dick." So I set out to change the Mid-Atlantic, and started the Mid-Atlantic Venture Capital Association. When I stepped down, we captured 20 percent of the money coming into the venture industry and we had more entrepreneurial backed companies in our region than Boston did. So, I could drive to board meetings. Now, I'm not taking credit. When I say, "I," I mean "we," because I had 60 people helping me with MAVA. Service providers, other venture capitalists. We could call Brook Byers and get him to come to Baltimore for a venture fair, or Dan Gregory from Greylock. And so all of a sudden, money started flowing into these Mid-Atlantic companies. I could tell you what happened afterwards, but that's another story.

**Hancock:** Well, it's a good time to pursue. Let's pursue that thread. After MAVA and--

**Newhall:** So what happened was, med[ical] went out of fashion and 50% or 40% of the companies that were in the Mid-Atlantic were med. And then really the technology focus shifted to the sons of the internet. Consumer companies - and really Mid-Atlantic was more software and hardcore communications like MCI, UUNET. So, we sort of lost our technology. Of the 120 firms, maybe there were 30 really big ones, and a lot of them went out of business when the bubble occurred, and a lot of the med firms went out of business. So, we have this lady by the name of Julia Spicer, and she took over MAVA and she sort of turned it into a startup incubator focus firm, because the NEAs of the world say, "Why do I need MAVA when I have the computer and I can track down any private company in the whole region?" So technology, changing composition of firms, and then the great shifts of capitalism, feast and famine, and so she's making a good job. It's no longer what it once was.

**Hancock:** Gone through the process of reinvention.

**Newhall:** Everyone has to reinvent themselves.

**Hancock:** Well, NEA itself has evolved and I wonder what your perspective is. You talked about that first fund, 16.5M, and then you started to define your roles among the three founders. Can you say a little bit more about that and what was that dynamic and interaction as you established the basic principles and working operations as well as the culture of the firm?



**Newhall:** Well, as we evolved, I became a healthcare service specialist, and a biotech amateur. Dick, who was a great, probably the best healthcare investor with Bloom and angioplasty and ImmuneX. He really shifted to technology, and that changed the way NEA originated deals. Because if there was a healthcare service deal in the United States, I would see it, because I knew the heads of all the big companies, I knew the heads of the entrepreneurial companies, and I had a reference list that was 20 entrepreneurs long. Dick did the same thing in the telecom business, and all the other high-speed data communications and all the things that he did like Juniper and Ascend. So we started forming teams, the tech team and the med team, and we had success and we had failure. One time we changed over virtually the entire med team, and the med team now consists, when I left, of 23 people - 32 percent were MDs with one to four other degrees, with 10 to 20 years' experience, and 18 were either COOs of major corporations or entrepreneurs. So we became a firm that had superstars. But superstars change the interaction of the people within the firm and it's much less a Band of Brothers than it is focusing on, "I got my portfolio. I'm in the med team. Now, it's led to good investment results. But NEA evolved from the three of us, which I call one organ grinder and two monkeys, (Dick was the organ grinder and Frank and I were the monkeys) into this powerhouse. But I played a role in bringing a lot of people into that powerhouse, and that was something I'm very proud of.

**Hancock:** Can we talk about some of the deals that you were specifically responsible for the lead investor?

**Newhall:** Sure. Oh. I think I've served on 65 boards. I think one of the areas, in retrospect that I was most excited about, I believed you had to change healthcare. You had to make it more cost-effective and you had to provide better outcomes. Unless a device company or a service company did that, it was a waste of time. So we helped to create a company called Elder Health. We hired a friend of mine and a friend, actually, my former partner. Chip Linehan incubated this company in the basement of NEA, and David came up for a great plan for a business. It was to provide elder daycare. So we'd have a daycare facility for Grandma and Grandpa. The problem with elder daycare, and Chip, by the way, was shifting out of the med team into the tech team, so I became the principle guardian of what is now called Bravo Health. And so we said, "No. We're not going to do daycare. Let us become a HMO." So we tried that for a while. Unfortunately, we had a CEO who was well-intentioned, but who believed you could sell it at the lowest and make it up in volume. Didn't work. So he morphed the company by giving credit for that into a case management company. And what we did was we picked up Grandma and drove her regularly to the community clinic or to a primary care physician. Most of these people are inner city, and then we made sure we called her every week to make sure she was taking her meds. So we called her and got her family involved, and so we made a lot of money, twice or three times what the government considers appropriate, but we saved 57 percent of total healthcare cost.

**Hancock:** Remarkable.

**Newhall:** And we brought in a CEO, Jeff Frolick, who was either COO or CEO of Pacific Care, and he led the company through this period of time and totally saved the company. What we did by doing that was we eliminated the nursing home emergency room in the hospital for elderly care. Outcomes were much improved, because I don't know how many times you've been to an emergency room, but that's not a place I would like to go for healthcare unless you like to see wounded people.

**Hancock:** Yes, I agree.

**Newhall:** And we took out, according to the Robert Wood Johnson Foundation, 80 percent of the cost of the last three years of life. Eighty percent times seventy percent is fifty-six percent of overall healthcare cost. I also was involved in doing the same thing for the Medicaid business, and then I had some biotech adventures too. Even a couple of technology companies in the very early days.

**Hancock:** I'd like to hear a little bit more about those companies you're invested in, especially if you could shine a light on your work as a venture capitalist. Many people looking at it from a distance don't really know what a venture capitalist does. They have a sense that there's money involved, but there's so much more that a great venture capitalist does. Could you describe--

**Newhall:** Well, you raise money, you affect the firm's strategy, you bring in key employees. You're a father confessor for the entrepreneur and his psychiatrist. You bring governance to the company, and you-- did I mention you bring them their largest customers? So I'd been a great follower of Millipore, which was a filter company in Boston. Great entrepreneurial success. Again, out of World War II, Vannevar Bush. And I knew this company and there was a certain chubby guy there by the name of Tim Barberich. Tony Evnin and I from Venrock go ahead and finance this company called Sepracor. And I certainly raised money for it. I did a lot of things for it. But probably the most important thing I did was, Tim was great, but he needed a soulmate that could keep track on the day-to-day how the money was spent. So we took him out to dinner at Rockefeller Plaza when the skating rink was there. We'd gotten in a horrendous argument, because I had identified Tony Newman, another guy to bring in as COO or CFO. We went out of the place to the-- and I almost got in a fight, fistfight with Tim. We were--

**Hancock:** Over this issue?

**Newhall:** Yes. He did it.

**Hancock:** Mm.

**Newhall:** But he-- I made the wrong choice. The guy I brought in <laughs> as COO. But then he, on his own, he went out and found David Southlow [ph?]. Now, the company produced about two billion and a

half revenues on its own. It produced three to four billion dollars of revenues by doing development work for other pharmaceuticals, particularly the Japanese. But today, Chirally Pure Pharmaceuticals, you had racemic mixtures and you just take one side of a racemic mixture. I think that's 350 billion dollars of revenues.

**Hancock:** We've talked a little bit about your work with the entrepreneurs, and another part in building your firm was to build your funds, which dramatically grew. Can you talk about your relationships with the investors and raising funds?

**Newhall:** Well, NEA had a totally different culture than the rest of the venture industry. When we set out, I'd read "Shōgun," and Dick and I, wanted to create a company that lasted a hundred years. Frank said, "I really don't care about that but you're a bunch of fun guys to work with."

<laughter>

**Newhall:** So we set off to create this company that lasted a hundred years. So we created a Band of Brothers atmosphere. We created transparency. Jack Delaney, who was a great venture capitalist, sent his limited partners a Christmas card and that was the only thing they heard from him during the year. When NEA was shipping paper, our reports would be this high. Limited partners would know what every company was doing in revenues. They'd know when we were of a management change. They approved our budget and they were really involved. And the other thing is that I recognized the importance of the fund-of-funds business. There were those at that time that thought, "You never should have a fund-of-funds investor." But really, I felt they were professionals. Where the people at some of the endowments rotated or not, and they would make better limited partners. So the people in our investment committee who were involved in <laughs> the decision-making contributed most of the time 80 percent of the money that went into NEA and they were Tom Judge [ph?], Bon French, Ray Held [ph?]. All these people that created the fund-of-funds business. I counted in NEA-10 that from the Abbott Capital and the people that had hired them that went off on their own, like AT&T, like the Bell Labs people that-- all those tech -- They contributed a billion dollars additive. So, we never marketed a prospectus. I mean, we had one, but we sold NEA through the way the firm conducted business. Now, they would stay with us in bad times. NEA-3 was a terrible partnership, but they led off NEA-4 that was like 60 or 70 percent larger than 3.

**Hancock:** How do you account for that? That people stuck with you?

**Newhall:** Because they were, my son says, trusted partners, and we were trusted by the entrepreneurs and we were trusted -- but let me get to the key point.

**Hancock:** Please.

**Newhall:** We had NEA-9 and NEA-8 was a great homerun. NEA-9 was a disaster, because we invested in way too short a time. All tech. Med was like eight percent at that point. And we go into NEA-10 and the bubble burst. We have a liability which goes back to NEA-8, I think. We had a company called Xros that a young man invested in. Six months after we invested, the company was bought for three and a half billion by Nortel. Short-term capital gain, we weren't supposed to sell. And they, Nortel, plugged this piece of super-communications equipment in and it went "kaboom."

**Hancock:** <laughs>

**Newhall:** It blew up. It was of no value whatsoever. They had to write off the total investment and Nortel stock went from 68 to 5/8. So we were in trouble, because we had this potentially big claw back, because we'd distributed Nortel. Rather than a full recovery of capital partnership.

**Hancock:** Disaster.

**Newhall:** 75/25. We thought we were going to have an 8X partnership. We would reduce that to 4 for planning purposes. The real number was 2 1/2 percent.

**Hancock:** Mm, mm.

**Newhall:** And our limited partners, everybody else was being asked to lower their fees. Well, lowering our fees would've made us unable to meet our capital commitments. You know what they did?

**Hancock:** What?

**Newhall:** They raised our fees. Because they understood the business well enough to understand that our economic structure was totally different than a 80/20 percent or a, some cases, 33 percent, and it helped get us through. We-- now, we put a portion of tens carry in there and we're going to make back all that liability of NEA-8. So those are two examples of what the fund-of-funds did for us, which was to stay with us when a lot of people wouldn't. And I found endowments to be very fickle. Now, not all endowments are. But I don't want to go into those stories.

**Hancock:** Mm. We don't need to touch on those, but I would like to ask you about this, you mentioned, the Band of Brothers and the trusted, transparency, that were absent--

**Newhall:** Trusted relationships.

**Hancock:** Yeah. And how did that actually manifest itself day-to-day within the firm, this Band of Brothers? What did you actually do--

**Newhall:** Well--

**Hancock:** --to facilitate that culture?

**Newhall:** --Frank was a great bird dog. I think he gave 25 of the best companies he had to younger partners. So, they didn't go on his performance sheet. I gave away 20 companies to younger partners. So when I had a really good company, I would try to put it with a younger partner that I thought should get the credit for it. It made a lot of them general partners. I think another sign of a Band of Brothers was when my first wife died, it was spring vacation. None of my social friends canceled their vacation plans to come back for Marcy's funeral.

**Hancock:** Such a tragic time.

**Newhall:** Dick and Frank were there in eight hours. They left their vacations, got special transportation, and they were there for me for a couple of days. That's a Band of Brothers.

**Hancock:** That is. And the transparency? How did that work in practice?

**Newhall:** Well, you tell people what your salaries are. You tell people, like, okay. Merck approaches us and says, "We want to do a healthcare venture fund with you, except only us." So we discussed this with our limited partners. "Should we do this?" and Bobby Nicole, who was from Kleinwort, says, "You can only have one master. If you have a bunch of investors that want a financial return and a corporation wants a strategic return, don't mix them up." We turned down Merck. Now, you have to remember, I'll have to tell you another story about Merck and NEA, but I'm not going to do that on a camera.

**Hancock:** Okay.

<laughter>

**Hancock:** We'll do that a little bit later.

**Newhall:** We'll save that.

**Hancock:** We'll save that. If I were in a partner meeting, is it Monday (or whenever day)? If I had been there in those years when you and Dick and Frank were really driving as the senior partners, what would that conversation have been like? How were the decisions made?

**Newhall:** Well, everything was a team, and eventually it was all the general partners, majority rules. Then it became med team majority rules. I believe that's the way it still works. But we would get into violent arguments. I remember when I called TiVo, Mark Perry's company, an over-sexed channel changer.

**Hancock:** <laughs>

**Newhall:** And, oh, we'd have big arguments. But, you know, after the argument, we smiled at each other and cracked a joke. And that was really the humor that Frank added to the partnership. We could be really heads-on against each other, but then when the decision was made, it was made by all of us. We supported it, and we went to any extent to make that decision successful and we forgot who said, she said, or he said that led to the investment.

**Hancock:** That's pretty rare.

**Newhall:** Yeah. Was.

**Hancock:** Are there other things either in practice or principle or culture that you think really make NEA distinct? Or that have led to its sustainability over time?

**Newhall:** Well, I think one of the things is fees. Let me take a hypothetical investment from the peak of venture capital times, right before the bust. Let us pretend there's a venture capital firm with a 3 percent fee, a 30 percent carry, and they are giving credit for covering capital when they pay capital back minus the fees.

**Hancock:** Okay.

**Newhall:** So it's a 10-year partnership. Such a partnership, 30 percent of the capital goes into fees. Not recovering capital, which means you start sharing carried interest when you're 70 cents on the dollar. Takes away another 10 cents on the dollar. Forty percent of the money goes to not making investments. NEA, one percent fee, payback capital. Payback fee plus interest. Ninety percent of the money goes into the ground drilling. I think we learned that venture capital is really exploratory drilling. You have a

wildcatter and he or she goes out in the desert and discovers this great oil field. Odds of success, one in a hundred. But you find the great oil field and you follow the field. Odds of success, one in three.

**Hancock:** Some people say that as they evolve their own philosophy or part art, part science for investing, that there's some critical decisions. One is do you bet on the jockey or the horse? What are the--

**Newhall:** Jockey.

**Hancock:** Can you give an example and why?

**Newhall:** Oh. Dick always used to say, "We're only one person away from a great company." You know, moving out the existing CEO of Elder Health and bringing in Jeff Frolick, you're only one person away. But the NEA culture was such that the most important thing we had was our relationships with entrepreneurs. So we wouldn't dilute them. If we had a company that had really done poorly but management did well, we'd put in a carve out. So why did 80 percent of the NEA's deal flow come from people we'd either worked with in the venture capital community or people that we'd worked with, entrepreneurs? It was because they knew when shit happened, that we would be behind the entrepreneur, and you'll read in "Dare Disturb the Universe," this was a shared culture. Scott Sandel articulates it, among the best. When Scott was interviewing for NEA, he went up to see a lady called Nora Zites, who was an associate. Wonderful lady. She said to Scott, "You know, when you are in these partnership meetings, a lot of times, most every time, the partners will vote for what's in the company's best interest rather than in what's NEA's best interest, selfishly." And that wins friends and influences people when you do it over 40 years with a thousand companies. And you think of all the vice presidents of research who know about this, all the CEOs, all the COOs, all the heads of marketing, and where are they going to go? In the healthcare business, technology became increasingly competitive but still healthcare was strongly team financed, and it made a lot of difference. I'd have companies that say, "I'll take a 20 percent discount to get NEA involved." I have offers from X, Y and Z, 20 percent less.

**Hancock:** That's a testament to how much people wanted to work with you. We've talked about some of the successes, but of course in times of boom and bust, not everything is up and to the right. Can you talk about some of the, you missed or some things that you would've done differently?

<laughter>

**Newhall:** Oh. Beware of experts.

**Hancock:** Mm. Why is that?

**Newhall:** Ken Langone, famous guy, had Pressprich, took EDS public, brought a little company to us in Atlanta and it was a fix-it company. Fix your whole house company. Called Home Depot. President and CEO, Bernie Marcus, they had a great management team. I was saying, "We got to invest in this company. We got to invest in this company, because it's going to change the whole way that people-- they don't go to hardware stores," or something like that.

**Hancock:** Hardware stores or...

**Newhall:** Are going to go to this warehouse that solves all their problems. So Frank really says, "No. We got to have some experts to look at this. You don't know anything about retailing." Although healthcare service and retailing are kissing cousins. And so we bring in two experts, "No, this company is doomed for failure, because they're expanding to California. If they don't go in their geographical region, they're dead. And by the way, the cost structure in Atlanta is totally different than a deal they'll be able to do elsewhere." No. We're not going to invest in you, Home Depot, at a 10 million pre.

**Hancock:** Ahh.

**Newhall:** So what does Home Depot do and Bernie? Their next expansion is to Florida. Right within their geographic footprint, and the real estate deals are better than they got in Atlanta. So beware of experts.

**Hancock:** You have these sayings, I think, following General Doriot, who was able to create pithy principles. What are some of the other ones that you live by? Beware of experts is one that you just mentioned.

**Newhall:** Oh. It's how to turn around a company.

**Hancock:** Mm. Let's talk about that.

**Newhall:** Fred Adler. It was a company called Bethesda Research. CEO was a very talented guy. You remember play called "The Fantasticks," a musical?

**Hancock:** Sure.

**Newhall:** He was the composer of that, and he married Fairleigh Dickinson's daughter. He started this company called Bethesda Research Labs, which was making the pans for the Gold Rush. They were making restricted and modifying enzymes that chopped up the DNA chain. But eventually, he tried to



become Amgen, he tried to become Boston Scientific, and the best thing was, he bought a, committed to a \$75 million dollar Taj Mahal without board approval.

**Hancock:** <laughs>

**Newhall:** And plus, he got in trouble with his wife, and so Fairleigh said, "No way I'm going to support this company anymore." So he brought in Fred Adler. Fred Adler was Data General, and he was the consummate turnaround person. But Fred had an unusual way of doing the business. He'd say to Steve Turner, the CEO, "I want you to sell me 10 percent of the company for a dollar, and then I will put my funds in at a dollar a share."

**Hancock:** <laughs>

**Newhall:** So I invested an eighth of a cent; they invested a dollar. But Fred was a genius in turning companies around. He only came to BRL twice, but what he did was divide the board into teams. So I had the job and Frank helped me hold the banks' hands, because they really owned the company at that point in time. Another team recruited the CEO. Another team basically figured a way to keep funds out of banks so you could pay vendors that were, you know, needed paying. Company is now called Life Technologies, or was until recently, and has \$20 billion in revenues. So Fred really turned it around, but he was not a company builder. But he certainly was a good instructor for how you deal with it, and basically that was the same format we used at HealthSouth. We divided the board into teams with a crucial task, and everybody pursued it and we reported to each other on our progress.

**Hancock:** When you're making assessments or working with the management founders and builders, what were the key attributes that you would look for for somebody who would-- that you wanted to work with that you thought would be successful?

**Newhall:** Norepinephrine to serotonin to the release of dopamine. Want me to explain that?

**Hancock:** Please.

**Newhall:** That's the common chemistry, the common brain chemistry, of creative people. Now, 60-some odd percent of entrepreneurs are what you call hypomanics. This is normal. Hypomanic bounces around up here. Don't need much sleep. They're interested in a wide variety of things. They can put disparate things together. They're totally committed to whatever the mission they have. They can be rude and abrasive or like Steve Jobs. Then there's another 30-some-odd. Same brain chemistry. They're called ADHD. I'm ADHD, Frank's ADHD, Scott Sandel is ADHD. I've had so many CEOs that were ADHD, and if you get through maintaining your ego through your early years, because people set out to destroy you

when you have ADHD. “Oh, you’re slow, you can’t think,” you know. “Why are you doing six things at once?” Well, when you’re starting a company, doing six things at once is a very good thing. Five percent are bipolar. I can’t name names, but I did have a CEO who is now dead. We made about eight times on the investment, and you know, whenever you punch the plastic on an iPhone, you should say “thank you” to Chomerics, because they pioneered that. But he was bipolar, and he’d name buildings after people and fire them the next day. I was kicked off the board three times. Fourth time for good. Dick, of course, was there with me and he was the good guy and I was the bad guy.

**Hancock:** You were the bad cop?

**Newhall:** Dick talked him into stepping back as CEO and bringing Art Carr, which was the making of the company. But I dealt with bipolar. My first wife was bipolar, and I certainly have been up the kazoo in ADHD, and I know more hypomanics. Those are the people that I enjoy.

**Hancock:** You talked earlier about the lasting effects of your experience in Vietnam with PTSD, and how you’ve found a way to have that experience and yet have a lot of productive work in your venture capital life. How have those things related? Lessons learned or reactions to? What’s the connection? We’ve been talking about different kind of profiles of other people.

**Newhall:** Well, dealing with crisis is very difficult, but with PTSD you deal with crisis every day, and you have your coping mechanisms, your defense mechanisms. So I think that dealing with company crises, you’re stronger if you have dealt with PTSD. So I’ve just been diagnosed with neurological damage from Agent Orange.

**Hancock:** Oh, I’m sorry. Sorry to hear that.

**Newhall:** And Parkinson’s, and so if I’ve gotten a little off track, as you’ve talked to me and asked me questions, I apologize. But everything in life is making lemon out of lemonade, so what you have to do when you have some disabilities is figure out how to make them work for you as opposed to letting them overcome you. When I was in my prime I could do six things at once. ADHD. My son is ADHD. My other son is ADHD. My first wife was ADHD. So how do you turn these difficulties into strengths?

**Hancock:** How? How have you done that? How do you--

**Newhall:** Well, I mentioned -- my wife says, “You’re great in a crisis, but terrible to live with.”

**Hancock:** <laughs>

**Newhall:** I think it was Andy Grove who said, "Every good entrepreneur is paranoid"? I may have started our conversation with that. So I really know how to deal with crisis. I mentioned the HealthSouth one where I got Alvarez and Marsal.

**Hancock:** Yes.

**Newhall:** Every company I'm involved with, I have a crisis plan. Or a greatness plan.

**Hancock:** Well, we've talked about some of the crisis plans. Tell us more about the greatness plans and how you pursue those.

**Newhall:** First you find the right CEO, and then second, you do what venture capitalists do, which is to find members of the management team to have a strong effect like the effect I described with Peter Barris at UUNET. Like the effect I had on Bravo Health, changing its business three times, and he worked closely with those companies, and you're intimately involved with most decisions. I've diagnosed one CEO's wife as being bipolar, and so you get involved. Keats said that what you need, a negative capability, to be a poet. I think you need negative capability to really be a great entrepreneur. Negative capability is put yourself inside something that is greater than yourself. It's negating the you for what you're trying to create. So let me tell you about Henry Ford. He goes away on vacation. He comes back and somebody has taken his Model T and painted it blue. So he brings together the entire company and proceeds with a sledgehammer to crush that car into a pancake. He had this vision of changing the automotive world and it was all due to the Model T he painted black. It was every man's car. I mean also, you think the internet went fast? I have a picture of New York in 1903. Fifth Avenue. There were about 3,000 vehicles, one of which is an automobile. Fast-forward 2013; 3,000 vehicles, one of which is a horse-drawn carriage.

**Hancock:** <laughs>

**Newhall:** So these paradigm shifts, as Dick calls them, they come as tidal waves. So you have to be able, when you're trying to help a company that's in the windsurf, a tidal wave. If you surf other tidal waves you can probably find some useful advice.

**Hancock:** Sometimes it feels like the tidal wave is a tsunami burying you. What advice do you have for entrepreneurs who feel like the challenges are overwhelming? How do they pivot? How do they find the resilience to pick up and start again?

**Newhall:** What's your dream? Do you want to make it or break it? Now, how many entrepreneurs get divorced? How many entrepreneurs' children don't turn out right? Venture capital and being an

entrepreneur are not for everyone. So hopefully, if you see someone who is, "I'm overwhelmed," you've done your plan, right. You have his replacement right behind him.

**Hancock:** That personal sacrifice, to risk everything and sometimes to forego things that matter to you, is something that an entrepreneur takes on and also a venture capitalist also. Yet people choose to do this and wake up day after day. What are the things that have motivated you to continue in the venture business and to wake up day after day in pursuit as a--

**Newhall:** Well, my grandmother. "Come back with your shield--or upon it." If you go to war, you go to war to win. If you start a company, you go to war to win, and the worst sentiment a person can create is not to be honorable, and to conduct your life with honor in all things. So that was the way I was raised.

**Hancock:** And you've stayed true. No doubt your grandmother'd be very proud of you and your children and that legacy. There come naturally worries and stress for somebody who's under risk. What are some of the kind of issues that would keep you up at night or create anxiety in you?

**Newhall:** Well, I used to put my iPhone beside me when the company was in trouble, and I'd get up at midnight, three and 6:00 A.M. to check it. I was always on guard.

**Hancock:** We've talked about NEA and we've talked about the early-- we've talked about your investments. Is there anything else that you'd like to talk about your own personal investments that you've led, before we turn to the industry at large and the economy?

**Newhall:** Yes. There were lots of investments I could talk about.

**Hancock:** I want to make sure that we have time to talk about this.

**Newhall:** I would talk about the good, the bad and the ugly.

**Hancock:** What fits into those good, bad and ugly?

**Newhall:** So the good is Bravo, AMERIGROUP, Sepracor, Supernus. I'll talk about Supernus later. The ugly was Frank had a friend who was very close to him, and he was from the Midwest. It was just in the beginning of our partnership, and we went out to see this company in Parkersburg, West Virginia. Frank gets very mad with me because I think company is a piece of something that falls out of a dog's rear.

**Hancock:** <laughs>

**Newhall:** And--

**Hancock:** And you let him know. <laughs>

**Newhall:** And Frank gets violently angry and so I said, "Well, maybe there is something you see here," that I don't. It was thermographic imaging for breast cancer. It was just an image of the heat patterns in the breast. I basically talked myself into making that investment, not wanting to hurt Frank. It occupied about 40 percent of my existence, and I went through four CEOs. Dick said, "I really don't think you should make this investment, because you and Frank thinks it's so good. But, you know, the CEO has this ring and I would never invest in a man with a ring like that."

**Hancock:** <laughs>

**Newhall:** It was. It was like a moonstone. It was half the size of his fist and...

**Hancock:** <laughs>

**Newhall:** But, the science at the end of the day was quack science. Early diagnosis of breast cancer, with just the heat images, is not scientifically valid.

**Hancock:** Mm-hm. So that's--

**Newhall:** So I had quack science, bad CEOs. That's ugly.

**Hancock:** That's ugly. What's bad?

**Newhall:** Bad is a company that has really good people but is in the wrong market or industry. You get involved with the people, and you don't give them the reality sandwich. I've had lots of companies that I think the management is great, but the industry they're in turns out to be the wrong one.

**Hancock:** So, what do you do at that point?

**Newhall:** Well, when you grow up, you give them the reality sandwich and say, "It's time to change your business model," So many companies that we've gotten involved with, the business model has changed over time. I think the classic example is that there was a company in Boston, Damon Blood Laboratories. Started out as a defense electronics contractor.

**Hancock:** And then how has it evolved in its business model?

**Newhall:** It became a billion dollar businesses working with blood. <laughs> So there's this company called Supernus, and it's a division of Shire. Basically they use drug delivery technologies to extend patent life. Because if you can come up with a new delivery technology for a pharmaceutical, a whole new game in terms of patent life for the delivery mechanism. Now, the delivery mechanism has to change efficacy as well, and it was in the CNS area, which I'm passionate about. It was working on ADHD. It was working on epilepsy. It was going to get in major depressive disorder, conduct disorder and ADHD, but the first products were epilepsy. And a partner of mine really was responsible for spinning this company out. Didn't have much in the way of revenues. Had potential royalty streams, and it was run by Jack Katar [ph?], who I believe is Lebanese. He had a little bit of PTSD, because growing up in Lebanon as a child is not easy-- he's tough. Fair, tough, honest. First thing that happens is this is a company that has never gone off business plan. Now, they'd been held up by the FDA so they didn't get approval until two or three years after, but in terms of accomplishing their mission, they accomplished them all. I was just compelled by it. So we spin the company out. First thing we know, we get these large royalty streams, larger than we expected. We're able to sell the royalty streams to put more money back into our own products. Our own products come online. Fantastically successful; 95 percent gross margins.

**Hancock:** <laughs> Wow.

**Newhall:** So that's the way it is with pharma companies, but your marketing cost is immense and your development costs are immense.

**Hancock:** R&D. Mmm.

**Newhall:** So we have one director in the company and he's been primarily responsible. They've met task after task after task, but their compensation is in the bottom 10 percent of the industry, both in equity bonus and current income, and he also wants to sell the company at a price of 10 or 11 dollars. So we eliminate the director. I like the way samurais eliminate people. You know how that is?

**Hancock:** I'm afraid so, but tell us. <laughs>

**Newhall:** You swing at each other and the man standing across from you says, "I'm fine." You say, "Shake yourself," and the top half of him falls over. So that's what we did to this director, because he represented a lot of stock ownership, and now the company has, one, we're not selling. <laughs> The stock is about \$46 a share, 500 million in revenues. Could be three billion in revenues, and the next products are composition of matter, which takes you out of the specialty pharm, 3X multiple in revenue and puts you into the biopharma, 10X multiple in revenue. Company's management is in the top quartile in equity awards. They're 50 percent in bonus, and they're 20 percent in current income. So I'm chairman of the board, and you have to be very careful as a director of venture capitalists that in your desire to produce peak performance, i.e. company that takes as little money as possible, because when you're delayed by the FDA, that goes through a whole lot. But you got to keep in mind what your mission is and that is to build a pharmaceutical company of major size and scope.

**Hancock:** I'd like to pursue that, the power for good or not, of a board member is immense, and how have you kept your eye on that and actually put that into practice? We've seen in the news of late when companies have, board members, have not been, really done their job in governance or in guidance. What's made you a successful or a valued board member?

**Newhall:** Well, first of all, I won't let the company do anything that's dishonorable. Now, in HealthSouth case, it was dishonorable, but I certainly knew nothing about it and I did everything I could to fix it when the problems occurred. I really think honor and holding a company to that transparent-- this sounds like apple pie and motherhood. Transparency. Treating your employees fairly. Lot of companies let personal vendettas between people affect who's promoted. When you see something like that, you got to try to interfere with it, and your ultimate power is the power of the purse, because if the company is not in break-even mode, then you control its destiny. But once the company is past that, your ability to really change those things declines measurably. So I've been fortunate enough to be involved with companies that I've treated in an honorable way.

Peter Barris, when he financed UUNET, the founder of the company didn't want to let other venture capitalists in, but Peter said, "I came to the party with those guys. They all have to be here, not just me alone. So I'll do it with those who came to the party, not alone."

Now, Dick had this little company called Forethought, and Forethought was working on software for something. First product didn't work, second product didn't work, third product didn't work. The businessman who was either CEO or COO says, "I can't take this anymore." I forget what the CEO was. I mean, he was like a used car salesman, and they brought in his head of development, an English major. So we're going to start a fourth product. NEA says, "No. We're not going to go along with you, Dick." So Dick says, "I will finance the company myself, \$60,000 a month. But if the company turns around and makes money, you can buy me out at cost." So this English major, he calls up all these software guys and company executives and said, "If you are going to have a conference, what do you want? What are

the features you want?" and the next thing I know, they know, they had this product which is now called PowerPoint.

**Hancock:** <laughs>

**Newhall:** They had FileMaker too, and the first day at a show they get \$2.3M in orders. Microsoft buys them out. NEA makes three times on an investment that had been written off. Dick says, "Well, you can buy me out at cost," and I said, "You're mad." We go to our investment committee, which we always did. In order to get things like that approved, we had to go to a small group of our limited partners who put out biggest dollars. They said, "Of course Dick's entitled to that." But how many venture firms do you know where the partners will take over the financing of the company and the-- so that's what I mean by honor that permeates. If you're not honorable (and we've hired people that were not honorable), as soon as we see it and understand it, we got rid of them.

**Hancock:** Those stories are very powerful examples. Thank you for sharing those.

**Newhall:** Mm-hm.

**Hancock:** Well, the venture industry has changed a lot and NEA with it. NEA over the time that you were there, its funds grew dramatically from its 16 1/2 million to double, double, double.

**Newhall:** Yeah. Three billion-plus.

**Hancock:** 3.3 billion this year?

**Newhall:** Yeah.

**Hancock:** How do you see NEA as it's evolved over the years from the time that you were there and its--

**Newhall:** Well, I was a big believer in larger fund size, because the investors that NEA appeals to are not those that are expecting a 15X partnership. The investors that NEA appeals to are the ones that want a superior rate of return in small cap companies, large cap companies, maybe LBOs. So that really is a two and a half to three X fund, although some of the bigger funds can do better than that. Now, the problem is, where you going to go today? Stock market, large cap equities, international equities, or perhaps you'd like to go zero yield bonds in Germany.



**Hancock:** <laughs>

**Newhall:** So, big money now wants to get into private equity, and I think that trend will accelerate. So that means you have to accept \$300M checks. Now, a lot of people around with a \$300 check, but they don't have a \$30 million check. So, if NEA can produce 2 ½ to 3 ½ X funds, maybe doing better sometimes, they'll be funded in perpetuity. The other thing is, it takes a dollar to start a company. It takes eight dollars to commercialize it, and so we wanted to be not only there for the startup but for the commercialization, increasing our ownership with successful companies, and [for] that you need big resources. Now, the problem is, the world, you ask them and they say, "Oh, NEA's a late-stage investment." True. Seventy percent goes in late-stage companies that we help to create, and so that's why I felt that larger is better. I'll tell you the challenge in running with NEA right now.

**Hancock:** That was going to be my next question. <laughs>

**Newhall:** Have you ever read a book called the "Gates of Fire"?

**Hancock:** No.

**Newhall:** By Steven Pressfield?

**Hancock:** No, I haven't.

**Newhall:** Tells the story of how a man called Leonidas led 30 Spartans to a gate. Big mountain, narrow pass. They were assisted by some other Greeks, but ultimately left with just 300, and they fought, 3.5 million Persians for five days, and gave the Athenians the time to build the boats that won the Battle of Salamis and later the Battle of Plataea. Had that battle not been won, it's possible that we'd all be wearing burkas now.

**Hancock:** Hm.

**Newhall:** Rome, Greece, Renaissance Italy. All would not have come into existence. Refresh my memory. What was the question again?

**Hancock:** We were talking about the change of NEA over time, and it's growing large. You're talking about the challenges.

**Newhall:** So--

**Hancock:** The current challenges.

**Newhall:** One of the challenges is, going back to this "Gates of Fire," when Leonidas constructed his team, he had gay people on it. He had Helots who were slaves. He had Olympic athletes, and they worked as a machine in something called a tortoise. Shields up, shields down, you know, and if they'd all had Olympic athletes, would that have worked? Because the Olympic athletes want to jump 10 feet, take 20 arrows and a shield and shoot all the archers, and that would destroy the tortoise formation. Well, NEA has attracted chiefs, and ruling chiefs is like herding cats.

**Hancock:** <laughs>

**Newhall:** And so that's the challenge for the firm now - is to take this enormous talent and get it to work – as that "Gates of Fire," – that smooth, functioning group of people.

**Hancock:** And that challenge is even, with these stars, these Olympic athletes, and now the firm is so large.

**Newhall:** Right, and how do you--

**Hancock:** And geographically distributed.

**Newhall:** How do you compensate those Olympic athletes?

**Hancock:** How do you do that?

**Newhall:** When we started out, another principle was every general partner is equal, because I'd come from a firm where people spent more time trying to produce their record and compensation flew accordingly. But what happens when you have billion dollar outcomes? That doesn't work anymore. So we really did two things. We instituted a bonus, modest bonus, if you make a billion dollars, you get \$20M bonus. But you also get to change your carried interest during the life of a partnership.

**Hancock:** Mm.

**Newhall:** And then we created something called the Management Company. Dick was responsible for this. The Management Company takes the people, five or six, who have made such a deal for NEA, a big deal for NEA, that to lose them would damage the ability of the firm to go forward. You've got 16 percent of the fees, which they don't use, and some of the carry. Then you keep that valued very low. When you retire, they turn it into debt at a very modest valuation. So, we really changed that compensation from everyone's equal, to a bonus to give people an incentive to create an organization that lasts a hundred years.

**Hancock:** As you look at the industry now, there are some choppy waters for the venture industry in the United States. Some people feel like there's too much money chasing too few deals. There have been issues about diversity. Policy questions that are maybe undermining the ability of venture to have the flexibility to pursue deals. What do you think are the biggest challenges to the venture industry today?

**Newhall:** Well, I think you've named them. It's always that. <laughs> Not diversity. Diversity in its form now is new. It's funny. If I tell you diversity, state of Pennsylvania asked NEA, "How many people that your companies employ are minorities?" and these guys were union members that were on the board and I think they were going to say, "Well, we're 98 percent WASP." You know what the minority population of our companies was? Eighty percent. You're a minority. Women. <laughs>

**Hancock:** That's right.

**Newhall:** And then we had Chinese, Asians. Now, the industry has not been diverse, and I-- Tom Nichols from Harvard is writing a history of the industry, called me up and said, "Well, you know, were women powerful in the '70s, '80s and '90s?" We certainly did not have many women in the venture capital business, but Janet Hickey controlled General Electric, which was like a five billion dollar venture capital firm.

**Hancock:** Mm.

**Newhall:** Dana, I forget her last name, was partnering with Alan Patricof, and I think now is largely running the firm. Sage Givens, who did a lot of healthcare serving, service investing with me, and that's another story. She created her own firm, had an incredible track record, and then was destroyed by accident. What's her name? Pat Cloherty. I think there were 20 or 25 women who were really powerful in the industry in that time. I couldn't name them for Tom, so now I'm trying to dig their names up. But the--

**Hancock:** It's important for us to capture their oral histories too.

**Newhall:** Yeah.

**Hancock:** We need to do that.

**Newhall:** Oh. You got to get Sage's. So, Sage works for this guy, Jack Delaney, who's first century, and he started all sorts of great companies. This is '60s and '70s, and she has a great record with him. Probably one of the best, if not the best record in healthcare service investing. So she starts her own firm, Acacia, and she gets these endowments, like Princeton and what have you, and Sutter Hill helps her, and she keeps on making <laugh> great investments. This is the, I mean, I think it's for both sexes. But I don't think it's possible to have two people in a family have venture capital or entrepreneurial talents. And so Sage has a house husband. And she pays for his education. He never decides to do any work. He wants to be a landscape designer. She first gets a clue that something's rotten in the state of Denmark when they're at San Francisco Park and they're having a glass of wine and a picnic, and a big thug comes up and steals one of her children. The husband stays there drinking the wine and she tackles him and everybody else in the park jumps on him. She later found out she was-- he was abusing her children.

**Hancock:** That's tragic.

**Newhall:** So they get divorced. And this is all the time that HealthSouth is going on. So she's testifying in front of Congress and going through immense pressures. Well, she raises her next fund. This is right before the bubble blows. And she's all set but the lawyer doing her documents did not redline them. And she put in a clause that's unique in the industry. Your partnership is liquidated if you don't make an investment in six months. She makes an investment in six months and a day, liquidated in 2000. So she goes to her endowment limited partners and says, "Please, you had committed to me before, commit to me now." And so, "No, our boards have said you can't make any more venture capital investments and it's not possible to raise one for four years." So she goes out right to a ranch, and her pelvis is crushed by a horse and she's managing her venture capital firm. And then she has, she's not a very good picker of men, another catastrophe, catastrophic. And she consulted for other venture firms and started her own company called Gambol Life, which she's now pursuing. But those are the dangers in the venture capital business. But I think-- I call her Jeanne d'Arc, The Maid of Orleans, because here she wins all the battles and they behead her.

**Hancock:** These--

**Newhall:** That's a story.

**Hancock:** That's a story where I may ask for the introduction so we have to-- these--

**Newhall:** But they're many stories like that.

**Hancock:** These are stories you've been committed to capturing yourself personally, and to supporting the preservation of the venture capital industry and its impact. From your wide experience working with people and creating these histories, what would be your sort of chapter? At the end as you look back at the venture industry as its evolved -- how would you des--

**Newhall:** Don't focus on yourself. Change the way the world is and the money will come. That's what I said when I got the Lifetime Achievement. And really remember you have a sacred trust, which is the future of this country. And don't abuse it by silliness, pettiness, ego. And don't let greed enter the equation because what you do will influence your grandchildren's lives. Everybody will have forgotten about you. <Latin phrase> .The glories of today disappear. But remember that your success lives in your grandchildren and the companies you create, or the industries you create. So many of my companies have been bought, but they're now parts of much larger - Like one company that we tried to get into the physician practice management business, but they bought Pharmacy Benefit Management. We got out of the physician practice management. That company became CDS, and now has \$230 billion in revenues. This is not a short-term game. Focus on the long term. And I think Dick felt that. Frank, in his own way, felt that, because he gave up his best companies for others. They got all of his partners. He probably didn't tell you any of that.

<laughter>

**Hancock:** He told the story in his own way. <laughs> When you were young, you talked about this drive that you had to try to change the world, and this passion for venture. Now that you've been able to devote decades of your life and seen the next generation coming, have there been some surprises along the way?

**Newhall:** Oh, they're always surprises. Shit happens.

**Hancock:** <laughs>

**Newhall:** And no, but I've been very fortunate that I have two children that think the way I do. They collect the same crazy stuff I collect. They have houses like I have. They're dedicated to the venture capital business. I think 90 percent of the people you encounter as a venture capitalist, treat you fairly. There are 10 percent that don't. But if you let that 10 percent influence your attitude towards the 90 percent you'll never have the 90 percent. So lots of people-- and I don't want to go into it, have really disappointed me. But turn that disappointment into a win. Somewhere I have a copy of that talk I gave at the NVCA. It was a brief one.

**Hancock:** Well, a belated congratulations for that Lifetime Achievement Award. It was well deserved.

**Newhall:** I also got the Spirit Award.

**Hancock:** That's right. So--

**Newhall:** So Bill Draper's gotten all three. I've gotten two.

**Hancock:** <laughs>

**Newhall:** And the rest of them are-- only had singles.

**Hancock:** I'll tell Bill when I see him next.

**Newhall:** <laughs>

**Hancock:** I--

**Newhall:** Look, I said when I got the award, "I just want to put the"-- because they have fourth generation in the business now.

**Hancock:** Yes.

**Newhall:** I said, "I want to put the Draper family on notice that we're breathing up their tailpipes, and we have rockets ready to launch."

<laughter>

**Hancock:** You know, I recently had the pleasure of interviewing Bill and Tim and Jesse on stage at the museum.

**Newhall:** Right. Ah.

**Hancock:** Of course, you know, the general was not able to be there, but we had three of the generations. And I'm sure he's on notice that the Newhalls are gunning.

<laughter>

**Hancock:** So you--

**Newhall:** In this book, you know, people in other venture firms are as important to you as your partners.

**Hancock:** Say more about that.

**Newhall:** Because you go through the good, the bad and the ugly with them. Your partners you meet with once a week, you have your partners' meeting, you see them a little bit but most of the time you're traveling to see companies. And so I was fortunate in having Paul Wythes as a mentor, to a lesser extent Bill Draper. He really became a mentor for NEA. We put him on the advisory board to the management committee. Jack Delaney at First Century Partnerships, Georges Doriot, Dan Gregory at Greylock, and these people would go out of their way to help me pick up the skills to be a venture capitalist.

**Hancock:** How did they do that? Is it like an apprenticeship?

**Newhall:** Well, we'd be sitting on the board of a company together, and they would walk me through their decisions. When I got them into a deal that was sour, they stayed with me to the bitter end and they worked—they did everything in their power to help make the company right. So, I learned a great deal. Jim Blair and Tony Edmond are as close to me. We traveled with Jim on our vacations and Tony is just an incredible prince of a human being. It's my honor to have worked with both of them. So, whenever I would bring in an investor, going back to honor, I would do my very best to make sure that that investor made money at the round he went in or she went in.

**Hancock:** Have others been fortunate to call you a mentor?

**Newhall:** I think people would say that I've been a mentor, including a number of CEOs.

**Hancock:** Are any of those relationships that you'd like to comment on or that we haven't discussed so far?

**Newhall:** I think the best one is our Mad Arab, Mohammed Masumi. And I practically grew up with the little bugger because he was a good friend of Adaire's so I'd bring him in to NEA. He worked somewhere in private equity before that. I really groomed him to take over my health care service practice and today he's doing much better than I did. He still comes and sees us on holidays when he's back in Maryland visiting his parents, and my son is living next door to him. The venture capital business is a very strange one and there's a lot of in-breeding in it.

<laughter>

**Newhall:** I mean these relationships are formed over decades and last maybe to the next generation. So that's one of the two things that give you barriers to entry in the venture business. One, you've created this mass of people who want to bring you deals. And the other thing is you build relationships that can be worked on for generations. I meant this isn't a common event in the venture business but certainly among the people that grew up when I did, that was the case. I had immense respect for my quote, "competitors."

**Hancock:** When you talked about your being raised to be a warrior and how venture is a little bit like fighting for the growth of your company--

**Newhall:** Against the status quo really.

**Hancock:** I'd like to just hear you talk a little bit about that--

**Newhall:** Well--

**Hancock:** -- how you define that battle. And how do you know when you've won or winning?

**Newhall:** Well, the first instances you have a unicorn. But that isn't winning. <laughs> I think it's much harder to win in the long term in the technology business than the health care business. Because once the health care company has its model, and we've done mathematical studies on this, it tends to work over an extended period of time. But if certain communications doesn't keep its technology current, you know, showing earnings, in the life of technology companies they reach pinnacle of success and then crash. Of course, for Schumpeter, that is the way capitalism works. In 1900, there were a hundred largest companies and most profitable in the United States. Do you know how many of them existed in the year 2000?

**Hancock:** Of the top hundred?



**Newhall:** Yeah.

**Hancock:** I can say less than five percent would be my guess.

**Newhall:** Four. <laughs> You nailed it. All these companies when you get involved with them, especially if you have a long-term focus, they had limited lives. But I think it's important to stay in touch with the companies which were your greatest success, which I tried to do, because they lead you to the next generation of company. So I had one company that I sat on the board of where it led me to 10 or 20 co-investments.

**Hancock:** In that creative destruction that Schumpeter talked about, reinvention - venture capital has really been a key partner with technology and making that change -- that's radically changed not only--

**Newhall:** Technology, services.

**Newhall:** I just got back from a presentation on Peleton, which makes this wonderful exercise bike.

**Hancock:** Yes.

**Newhall:** And another company that makes keys. Do you know that most <laughs> I'm going to sound like I'm biased or, a lot of people that repair locks, now are associated with crooked organizations?

**Hancock:** <laughs>

**Newhall:** And they take an impression of your key. So, this company is founded on the basis of, you know, like leave your gene code, your key with this company on the Internet. You lose a key, you want to change a key, it arrives next day. Now I'm at the point where I'm losing four keys a year.

<laughter>

**Newhall:** But those companies are going to be billion dollar businesses. But they're technology in a way. So it's technology in its broadest sense, but it's mostly innovation.

**Hancock:** Some critics of the industry have called it vulture capitalism instead of venture capitalism. What would be your strongest rebuttal? In other words, what could you say in terms of--

**Newhall:** My life. I shoot vultures. But it is. You get, you know, Series Z and you have all sorts of preferences so the whole alphabet isn't warring with you over whose preference should be first ranked. So I've always tried to avoid that or deal with a partner. I only dealt with about six other venture firms. Now I had lots of other investors but the people that I wanted in the foxhole beside me were people I would trust that when those wars occurred between classes of stock that they could be solved rather than a kamikaze style. So--

**Hancock:** So, earlier today you were talking about venture's impact on the economy. I'd love to hear you say that again. We didn't have a chance to record that.

**Newhall:** Sure. Ask me what the biggest venture deals I know of.

**Hancock:** What are the biggest venture deals that you know of? And why has it changed?

**Newhall:** Gulf Oil, Carborundum, General Reinsurance, Alcoa Aluminum, IBM, 3M, Eastman Kodak, Polaroid, Thiokol, Eastern Airlines, McDonnell Douglas. The history of those is lost because they were either financed by angel investors or by institutional venture firms. Andrew Mellon in 1880 had an institutional venture capital firm that today is the basis of the Mellon fortune. Lucius Ordway was a guy in Minnesota and he had an idea for a company and so it had a product that would sell him a little bit. But he brought in this guy by the name of McKnight, he was an angel, recruited the CEO. And low and behold, they put sand on a piece of paper and that was the origin of the 3M company. So, it's not surprising we're in the process in the United States of destroying our history. The history of the venture capital business has never been written. And that's why we commissioned the oral history, and that's why I'm so much of a fan of what you're doing. Because unless you know your history you will make the same mistakes over and over and over again, which is what's going on in the world right now. We're making a lot of mistakes that have been made many, many times before. So, what I want to do is try to get some measure of this history out, so that's why I'm writing "Dare Disturb the Universe" just to get that history out.

**Hancock:** We've talked about some of the themes that are in your book. Are there others that you would be willing to share for this video Oral History?

**Newhall:** Well, I don't try to talk just about the wins, I talk about the disasters. But I talk about the wins too. Like Scott's career is a fascinating example, because he did exploratory drilling, ie, he found the pot of gold and then he looked for the rest of the mine. And he made a difference in companies after companies after companies. And so, watching this now through multiple generations is very exciting. I wish it could be made into a movie.

**Hancock:** It should be.

**Newhall:** There should be a movie some time about, you know, what venture capitalists do. It's good, as opposed to vulture capitalist. Any industry is going to have vulture capitalists.

**Hancock:** We are partners on a movie about the history of Silicon Valley and these stories are stories of people who have changed the world. It deserves to be told.

**Newhall:** Mm-hm.

**Hancock:** I'd like to just close with two questions. One, is looking back kind of in a big sweep way, how do you measure success or fulfillment as you look back at your life and your work, particularly related to the venture industry?

**Newhall:** Well, that's the problem of being the type of person I am. Because I don't feel that I'm successful in my heart of hearts. I ruined some women I loved. I made mistakes in companies. What really got to me was what Dick said to me when we started the partnership, "The only thing that counts is your next time at bat." So, what I do is I forget everything I've done. I don't take pleasure in it. But I damn well want to save lives with fearful odds. I want to help the venture capital industry with "Dare Disturb the Universe." I want to help people solve dealing with trauma. So, I'm still in the batter's box trying to change the way the world is and I don't intend to get out.

**Hancock:** We need you to stay in there swinging. My last question is--

**Newhall:** This is why my wife sews my name in my jacket so I won't forget it.

<laughter>

**Newhall:** That'll keep me at least – I'll remember who I am when I go in for a meeting.

<laughter>

**Hancock:** You've talked about this importance of legacy that stretches back generations to your grandmother, Captain Abbott and also looking forward to your sons and ahead to changing the world for your grandchildren. What advice would you give to a young entrepreneur or a young future venture capitalist?

**Newhall:** My granddaughter, Sidney, has her first company; it's called Sidney's Slime.

**Hancock:** Sidney's--

**Newhall:** Slime.

**Hancock:** Slime? How old is Sidney?

**Newhall:** About 11.

<laughter>

**Hancock:** So if you--

**Newhall:** So my advice--

**Hancock:** What would be your advice to Sidney if she wanted to be an entrepreneur or to be a venture capitalist?

**Newhall:** Slime, they're too many competitors. You're not going to get a distinctive product and it's time for you to move on and find something else better-- that's better. And we run our family like a corporation.

**Hancock:** How does that go?

**Newhall:** So, we all have balance sheets. We all have P&Ls. We all have goals for like liquidity. We've written a cookbook of what are the values in this family. I wrote it. It was about 35 pages long. And we try to make sure that we're living it. The boys disagree with some of that. So, my feeling, for example, is if you have a child who becomes a drug addict, rapes someone or kills someone, you give the person enough money to live on, but you take them out of inheriting money that will enable them to do bad. Because that's what I believe in, you know, you only reward behavior that is productive to mankind. My sons disagree with that because they can't get past the thought of if their daughters don't turn out, will I abandon them? Well, I believe in tough love. So this outlines all of these ideas about how you run a family. And we basically try to make decisions as a group. We disagree. We'll get into discussions of our marriages. There's very little going on that we don't know. Now Ashton tells me, basically, to jump off a cliff about a third of the time.

<laughter>

**Newhall:** And, you know, more often than not, he's right.

<laughter>

**Newhall:** But that's the type of relation we have. It's really the same techniques I used with NEA that are the techniques that I use to run a family. Now I don't run the family anymore, I'm over the hill, but the boys are.

**Hancock:** Tell me who that's a photo of and.

**Newhall:** The photo's dedicated to my father. And this is Laurance Rockefeller. Now Laurance was a man who's only mentioned in the footnotes of four of the 400 books about the Rockefeller family. He created a lot, a lot of companies. He created the aerospace industry. He created the airline industry. He created ecotourism, like Caneel Bay. So you have all these jets, where do you go? You go to rock resorts. He also created a good part of the National Park Service, yet no one knows about Laurance. He's lost. And he was a whiz kid, I believe, during World War II, responsible and clearly a man of destiny. When he was going to Princeton his classmates would ask him, "Why do you only have a \$3 a week allowance?" And he said, "What do you think I am, a Vanderbilt?"

**Hancock:** <laughs>

**Newhall:** And that was the nature of him; he was tough as nails but he also had velvet gloves. The first time I met him was when my father was working on a company called Flight Refueling, which is another whole story. Basically, it was a refueling system designed for close-in support of ground troops, and it saved my life in Vietnam. But I can remember sitting in Laurance's lap, and he asked me about my paper that I was preparing, which was about Hannibal's effect on Rome when I was eight or something. And my father was not a poet but Laurance was. My father was an accountant and engineering, although he could be poetic at moments. But Laurance was able to get, you know, the real mission of what venture capital was. Oh, the mission of Reaction Motors is to get a man to Mars or the stars. Think of being able to see that. You've seen the Bell X-1 fly. You've seen the Viking Rocket. How would you like to do things like that for a living? He could tell a story of a company and it was just a compelling story. I guess he gave me a half an hour during cocktails. When my family heard he was coming, they prepared the house for like three weeks before. Everything was washed six times, dusted 20 times. And they dressed me in a suit that would've been very appropriate at the wedding of Al Capone.

**Hancock:** <laughs>

**Newhall:** It was too large for me, baggy and I wore a Countess Mara tie that had Zeus's Thunderbolts on it. And I thought I looked like a grease monkey, which I did.

<laughter>

**Newhall:** But despite my appearance Laurance gave me the time of day. And if you read "Dare Disturb the Universe," you'll be able to listen to the advice that he gave me. It's all down there, because I wrote it down as soon as I was old enough to do so.

**Hancock:** How old were you when you met him?

**Newhall:** I was, let me see, we moved to Baltimore in '57. I would guess this would be around, right around that time, '58. I was born in '44.

**Hancock:** So you were still a teenager.

**Newhall:** Right. But I was still fascinated by Chuck Yeager and "The Right Stuff." So Laurance was very important. And little-,remembered Peter Crisp could tell you much more about him.

**Hancock:** Mm-hm. And that advice that he gave you, was it that day when he talked with you that day at the cocktail party?

**Newhall:** Yes. Still is with me.

**Hancock:** And what were his words? Roughly speaking, what?

**Newhall:** I can. I quoted them before and it's, "Our job is to see the future, not what is, or what has past, and do the honorable thing." And build companies that, you know, think of the impact that-- the flight and aerospace, -- has had on this planet - or rocketry will have in the next generation. So, he was able to put those hopes and dreams into something that became very real for me, for a 12-year-old or however old I was.

**Hancock:** Thank you. Next we have General.

**Newhall:** So, this is General Doriot another whiz kid. When he came in as a quarter master general, the average size on a tank in World War I, foot size, was six. The average size of a tank driver was nine. He

changed all that. Boots were leather sole. Well, they didn't provide traction, so early into the war all boots were rubber soled thanks to him. When he came into the war, we sent tents to the Philippines. They were supposed to be used in Normandy in World War I. They lasted three weeks. So, he designed clothing for the war effort. He designed weaponry-- or not designed, but caused it to happen. I think, you know, he dressed like a very debonair Frenchman and I'm convinced he practiced his French accent every morning in front of the mirror.

**Hancock:** <laughs>

**Newhall:** Because he had a strong poetic French accent. I don't know, I think he's scratching his ear with a pencil right here.

<laughter>

**Newhall:** But again, I went to him, trying to get a job, and he told me what venture capitalist do and it's again, in my book. Again, the mission was the same, "you got to see the future." I would go to his mission or his annual meetings and he would talk about this company he started and it was building a tunnel under the English Channel. And he said, "I don't know whether this company is going to survive, but one day there will be this tunnel and it will change Europe forever." And so, he was able to again encapsulate for me the ramifications of what venture capital does. That was a great lesson for a young Harvard Business School student to learn. And I'd rather go to his annual meeting than I would go to a dull statistics class that meant nothing.

**Hancock:** <laughs> So that's General Doriot.

**Newhall:** Changed a lot of people's lives, that manufacturing course he had. And this is Dick Testa. Now Dick Testa was like the head of one of the major [law firms] - Ropes & Gray or something, like a big law firm in Boston and he was like 28 years old. Testa means head in Italian and I think he graduated from Harvard when he was 12, I don't know.

**Hancock:** <laughs>

**Newhall:** I exaggerate. But he was very enamored of the venture capital business. And he met a man by the name of Georges Doriot. And Georges Doriot said, "I want to hire you as general counsel for American Research and Development, not to work there but to be our counsel." And so, Dick's apprenticeship in the venture business is, Doriot said, "I had a company that you have to turn around, Documentation." So Dick went out there and in about six months the company was straight. He was -- only wrote legal agreements in English. And we came to him with the idea New Enterprise Associates. He said, "That's great. If you don't raise your money I won't charge you. But I expect to be your lawyer for a

long time if you're successful." And he went on and found Testa, Hurwitz & Thibeault, which at one time had almost an East Coast monopoly on representing venture capital firms. And so for me, he gave me some of the best business advice, and he explained to me how to read a legal agreement translated in English - and eliminate 80 percent of it or 95 percent of it.

**Hancock:** <laughs>

**Newhall:** So he was a remarkable man. He died suddenly. I think his first firm lasted six months after his death. So he didn't follow his own advice, create management succession. But a lot of people who have good advice don't follow it themselves. That's what he taught me as well.

<laughter>

**Newhall:** So this is the engine of the Bell X-1, in miniature form. It was my father's pen holder and, of course, Reaction Motor built this engine and later went on to become Thiokol, and Reaction Motors became the Aerospace division Thiokol and the rocketry division. I wish I could tell you how this thing was going to work, but I once knew but have forgotten. But Arno Penzias, who's one of my partners and won the Nobel Prize for the Big Bang Theory, when my father, when they flew the first Concorde, the people who helped to create the technology were asked to help fly it over to Europe. He flew it for five minutes or something. But Arno suggested I should put the Concorde over top because this was what created that and what's created our aerospace industry and our military defense today. I keep that as a reminder ... it's like playing pool with a hundred balls on the table and you hit one, it hits another, it hits another, it hits another. And that is very much the way companies get started. So this is a reminder of that for me and my sons.

**Hancock:** Some people have a word that they might give of advice. Is there one to a young entrepreneur or is there one word that you would give as a mantra?

**Newhall:** Honor. Change the way the world is with honor.

**Hancock:** It's a perfect way to end. Thank you so much Chuck, for this opportunity to hear from you.

END OF THE INTERVIEW