Oral History with Charles W. Newhall III

NVCA-Venture Forward Oral History Collection

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National Venture Capital Association
Venture Capital Oral History Project

Charles W. Newhall III

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

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

As the venture capital industry prepares for a new market reality in the early years of the 21st century, the National Venture Capital Association reports (2008) that venture capital investments represented 21 percent of US GDP and were responsible for 12.1 million American jobs and 2.9 trillion in sales. These figures, while significant, greatly understate the collective accomplishments of the venture capital industry.

I'm pleased to have initiated and given my early support to this project, which received support from NVCA, and is now funded by the Harvard Business School. I believe these oral histories will advance the understanding of the venture capital industry. This collection, along with Paul Bancroft's Bay Area oral history project at the Bancroft Library at the University of California, Berkeley, and Paul Holland's Silicon Valley project for the Western Association of Venture Capitalists, will add significantly to a growing body of venture capital memoirs available to the public sector.

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

Charles W. Newhall II

2013

VENTURE CAPITAL GREATS

A Conversation with Charles W. Newhall III

Charles W. Newhall III co-founded New Enterprise Associates (NEA) in 1977. Prior to founding NEA, Chuck was a Vice President of T. Rowe Price. He played a major role in formulating NEA's investment strategy with partners Dick Kramlich and Frank Bonsal, and he has been instrumental in financing the dramatic changes in both the health care services and pharmaceutical/biotechnology industries. He was also a start-up investor in several companies that helped to change the health care delivery system. One such success was Amerigroup, the leading independent Medicaid HMO, which Chuck helped to start in 1994. He also helped to start BRAVO, a company that case manages the frail elderly in the last three years of life.

In 1988 Chuck co-founded the Mid-Atlantic Venture Capital Association (MAVA) to encourage the growth of venture capital in the region, and is Chairman Emeritus of MAVA. In 2010 Chuck was honored by NVCA with the American Spirit Award for his sponsorship and guidance of a project chronicling the achievements of venture capitalists and the evolution of the industry by producing oral histories, archiving early documents and establishing research outlets for academics wanting to understand the industry. Chuck has served on the board of numerous charitable and community institutions including the Greater Baltimore Committee, as well as the Baltimore Museum of Art, where he has been involved for thirty-two years and served a term as Chairman of the Boards.

Chuck served in Vietnam commanding an independent platoon including an initial reconnaissance of Hamburger Hill. His decorations include the Silver Star and Bronze Star V (1st OLC.) He received an MBA from Harvard Business School, and an honors degree in English from the University of Pennsylvania.

The following is an interview with Charles Newhall of New Enterprise Associates, (NEA). This interview is taking place at Mr. Newhall's home in Owings Mill, Maryland. Today's date is April 18, 2013. This interview is being conducted for the National Venture Capital Association and the Harvard Business School. My name is Carole Kolker. This interview has been edited for clarity.

THE EARLY YEARS

CK: *Okay, Chuck, let's get started. Just for the record, when you were born and where?*

CN: November 18, 1944, at Walter Reed Hospital during World War II, in Washington, D.C.

CK: *Oh, you were born in Washington. Were your parents living in Washington at the time?*

CN: My father was a colonel in the Army Air Corps — he was a Whiz Kid — and his job was to develop fighter aircraft; to produce them, and then to allocate them between MacArthur and Eisenhower. So he joined in 1940, in anticipation, and played an important part — a minor one, but an important part — in the conversion of the American economy into a war machine that did as much to win World War II as the fighting soldiers did.

CK: *And were your parents from Washington?*

CN: No, my father was from Faribault, Minnesota, where my family had been involved with the military boarding school called Shattuck since the early 1870s. My great-grandfather on my father's side had been a captain in the Union army. He was offered promotions many times. But he had served in virtually all the battles of the Civil War: Bull Run I, Bull Run II, Shiloh, Antietam, Fredericksburg, Ball's Bluff. Another twenty battles. He had quite a distinguished military career. He was military commandant of this school. My grandfather graduated from Shattuck, taught there, and eventually became headmaster. Dartmouth gave him an honorary doctorate for pioneering the concept of teaching small classes in comfortable surroundings. My father went there, and I went there. The school was started in 1858. This was eighteen years before Jesse James rode through Northfield, Minnesota, guns blazing. My grandmother told me that the Shattuck family in Boston raised money from Queen Victoria to produce soldiers who were raised by the Church of England. We were the warriors of god.

CK: *What was your father's name?*

CN: Charles Watson Newhall, Jr.

CK: *And what was your mother doing during this period?*

CN: My mother was an airplane stewardess. But in those days, you had to be a registered nurse and a pilot to be a stewardess. So it was quite a different job than what the stewardesses do today. They had met because my father obviously had a real interest in flying. He had been working in Chicago for a man by the name of Britton Budd. And Britton Budd had been brought in to turn around the Insull empire. The Insull empire was a chain of utilities that was a Ponzi scheme. Mr. Budd took over as CEO after the Insull brothers, I think, were put in jail. And it was a chain of, I don't know, twenty utilities. Big companies. He went in and saved it and made it a viable economic entity. Father was an MIT engineer, and he started working for Mr. Budd, and that was his entry into business. He went to Northwestern for an MBA, and then Mr. Budd helped him get the job he got in the Pentagon. A lot of venture capitalists came out the Whiz Kid program. Doriot was a Whiz Kid; Laurance Rockefeller was a Whiz Kid. General Draper wasn't a Whiz Kid, but he was very much involved in World War II. So a lot of these World War II veterans were instrumental in the creation of the institutional venture business, which started in the late thirties.

CK: *Did you have any siblings?*

CN: Only son of an only son of an only son.

CK: *As an only child, what were your interests? Were you a reader? Were you a tinkerer? How would you characterize yourself?*

CN: I was a voracious reader. I was raised by my grandmother, because my parents were caught up in their own lives. They moved all the time, so I never finished school where I started. After the war, Father was hired by Laurance Rockefeller. Father's job was to try to go in and help companies that were in trouble or just starting out.

CK: *So you were just very young; you were born in '44.*

CN: Right. Father was hired in late forty-five. Laurance wanted to create the aerospace and airline industry, which he did almost single-handedly. And father obviously knew jets. One night Laurance called him. He'd had too much to drink. It was three in the morning. Laurance had gotten a call from the secretary of war. That job should be called the secretary of war. The title, the secretary of defense is baloney. Laurance told Father, "There's a company going bankrupt in Morristown, New Jersey, tomorrow, and if the company is not saved, the future of the United States is in grave jeopardy. That's just what I've been told by the secretary of war. So come by the office in a couple of hours, pick up the check, and go down and solve the problems in Morristown, New Jersey." It turned out the company, Reaction Motors, had borrowed some money from a bank, and they couldn't pay it back. The company was started by Wernher von Braun and the V-2 crew. Von Braun later left. But the company retained some of the German scientists who had invented the V-2s, flying bombs in World War II. The Germans had really built a jet engine before the United States did, but they never made it into a military weapon. And so the company created the engine for the Bell X-1, which was the plane that Chuck Yeager flew. I got to meet him, as a young child. Growing up, I was continually exposed to both entrepreneurs and scientists, although I was an English major and had limited understanding of what they were talking about. It all sounded very romantic.

CK: *Other than reading, how would you describe yourself as a kid? What kind of kid were you?*

CN: Skinny. Not very popular. I always had some crazy project that I was trying to create. At Shattuck I started the literary magazine, a hunting club, and one other organization. My grandmother encouraged me to dream greatly, like writing a book.

CK: *And your grandmother's name?*

CN: Evangeline Abbott Newhall.

CK: *And what were the values in your home that you were either told or picked-up in conversation?*

CN: My grandmother felt she'd spoiled my father, and she didn't want me to be the same way. So my role model was Captain Abbott, the war hero. It was understood that I would go to war in a warrior's role, from a very early age. I was brought up to be a stoic, which is to divorce yourself from feelings, and to face adversity and erase it. It is what I did.

I would stay with my grandmother on the weekends. I was sent to boarding school right after the sixth grade. She would tell me stories. I didn't watch television. I'd hear stories about Captain Abbott during the Civil War. We'd talk about books and a lot of things. We had very serious conversations. I'll read you something I wrote about her: "She is the greatest influence in my life. I can hear my grandmother asking me, 'What is honor?

Honor is something all kings claim, but few have. Honor cannot be given, nor can it be taken. To gain honor may take years, but you can lose it in seconds. Honor does not lead to riches or even happiness. To have it means you must carry the responsibility for the rest of your life. We must all get used to death and not having our hearts' desires. What we can do in life can last for an eternity. Your honor will live after your death in the minds of those that have known you and in the minds of those who remember you for what you have done. Honor is often gained in times of crisis, the crucible of fire, for that is where steel is forged. My son, for you are as much my son as my grandson, come home with your honor.' That was what she said. But I knew what she meant. 'Come home with your honor or do not come home.' My grandmother continued: 'I do not envy you for the life you will lead. Remember the gods only torture those they love. If you are one of fortune's favorites, as I believe you are, then you will win great triumphs, but you will have to suffer more than most men can bear. You will trust people who betray your trust, and each betrayal will take away a piece of your heart. But you must never stop trusting. Ten percent of the people you trust may betray you, but keep in mind the ninety percent who do not. You will dream greatly, suffer to make your dreams reality, only to see them vanish like sand in an hourglass. Remember, greatness is a vision. Nothing more. An ephemera. Strive for greatness, but never set your heart upon achieving it. To be unhappy is a sign of weakness.'"

CK: *And how old were you when she talked to you like this? Was this before you went to Vietnam?*

CN: This was right before I went to Vietnam. But I'd been imbued with these sorts of stoic values — don't show pain, don't show emotion — from the age of six on. She'd tell me stories about the Gray Ghost, John Singleton Mosby, and Captain Abbott. My great-grandfather, Captain Abbott, had fallen in love with a Southern girl, Victoria Cross. He would ride across lines to see her. He was going to propose to her on Christmas, 1864. He had a jewelry box and an engagement ring. Now Mosby — one of the best cavalry leaders in U.S. history, better than Jeb Stewart, the South's hero — was known for his daring and his surprise. I followed his battle tactics, and they came of use to me in Vietnam. "Attack when the sun is at your back," and all sorts of little things like that. He was a good friend of the Cross family, especially Fanny, my great-grandmother. He captures Captain Abbott behind Southern lines, on his way to propose to Fanny. He knows that Abbott is Fanny's fiancé. He drops back in the line of cavalry troops. He wears this hat with ostrich plumes coming out of it, because his ancestors were cavaliers and he dressed like a cavalier during Cromwell's Rebellion. He says, "Are you Fanny's boy?" My great-grandfather says, "Yes." Mosby says, "I'm going to lead my men astray. I want you to drop off the horse, take your presents, go to those woods, and then get to Fanny and do what you have to do." Mosby yells, "Prisoner escape." He takes off the other way. Abbott hides, then goes to Fanny and proposes to her. I grew up with stories like this.

CK: *The romance of war.*

CN: I knew from a very young age that I either wanted to write, or I wanted to be a professional soldier in what they now call special ops. I was going to be a warrior, or I was going to be a writer. Then there's a story of how that led to being a venture capitalist.

CK: *Okay. Well, we're going to get to that. First, did you ever earn money while you were in high school? Did you ever work for money?*

CN: Oh, yes, all the time. Farm work. I had to put my body into physical condition. I would lift heavy alfalfa bales on a moving tractor and pile them high, ten feet high. And I worked as a waiter at the World's Fair. I made an enormous amount of money. Most of the time I was getting ROTC pay. Then I was in the Special Forces reserves when I was in college, and they paid me.

CK: *What were your goals for yourself when you graduated high school? Did you have a direction?*

CN: I wanted to be a writer or a warrior. Maybe both.

UNIVERSITY OF PENNSYLVANIA 1963 - 1967 BA English

CK: *So you went to the University of Pennsylvania, 1963, and you majored in English. How did you see this fitting into your future? Did you have a career path?*

CN: Yeah. I was severely learning disabled. Like all my children and a lot of my ancestors. I had very bad SAT scores. Somehow I was admitted to Penn, but they had achievement tests. Penn exempted me from freshmen and sophomore classes, with the exception of science. So I sort of went to graduate courses, junior courses in my freshman year. I took a course in Greek history, where we studied the Peloponnesian Wars. We'd read three thousand pages a week. You'd read *The Iliad* and *The Odyssey* in one week. I didn't go to fraternity parties; I went jumping out of helicopters on the weekends, in Maine and in Puerto Rico and up and down the East Coast, with the Special Forces reserve unit. I'd be walking around campus as a Green Beret, with a knife in my boot, while all the other people in the college were protesting and saying, "End the war." I'd walk right through a crowd of these protestors while I was taking courses in sculpture, art, and history. I had free rein, I studied pretty much what I wanted. My senior thesis, "How to Be," was a study of how romantics deal with life. Most of them fail to deal with life. I read Henry James, Faulkner, D.H. Lawrence, Fitzgerald, and Conrad — all these books that dealt with how romantics dealt with life. I tried to combine literature with criticism, like Cleanth Brooks did with *The Well Wrought Urn*. I didn't succeed, but I gave it a good try.

CK: *Were there any mentors at Penn?*

CN: Yes. I'd say my most important mentor was Dr. Landon Burns. He was one of my favorite English teachers. Nancy Leach was a mentor who taught a course about Henry James. Nancy looked like Isabel Archer in *Portrait of a Lady.* The first of my captains, Captain Rose, was an important mentor. He was the number two guy in the ROTC unit at Penn. I was up at that ROTC unit for instruction three times a week. We'd go away on weekends. It was a big commitment of time. There were three captains in my life that taught me how to be a warrior.

In one weekend exercise, I commanded a Ranger platoon that was going to ambush the rest of the ROTC battalion. We went on about a day-and-a-half hike over some of the worst terrain I've ever encountered, even worse than in Vietnam. We scaled a big, rocky ridge line at night. We climbed all at night, going entirely by compass and carrying a full combat pack. We performed the ambush, and then we go back to the barracks. I was sitting in the officers' bunk room. The rest of the men were in the enlisted men's bunk room. I was a freshman, commanding juniors and seniors. I flopped down on my mattress while the rest of the men were fixing their beds. Captain Rose comes in and starts shouting at me. He says, "You don't sleep until your men are asleep. You don't eat until they have eaten. If they put their lives at risk, you lead them from the front, not from behind. You cannot afford to be tired. Tired is lazy. Lazy is dead." He was a man I highly respected, and to have him say things like that really shook me up. I'm a slow learner. I had to be taught that lesson again in Vietnam.

U.S. ARMY 1967 - 1969

CK: *So you graduated from Penn in '67. And what were your plans?*

CN: Well, I was a finalist for a Thouron scholarship, which is like a Rhodes. I came very close to winning it. If I'd done that my life would have taken a different pattern. I would have gone for Oxford for two years, to get my master's degree. I was becoming disillusioned by that time with academic life, because I'd been taking a lot of graduate courses, and I saw the passionate squabbles that academics get into over nothing. They unleashed vitriol and dirty politics on people that disagreed with them. My idea of teaching was to make Hemingway live for students and do it in an unconventional way. I lost the Thouron scholarship. Like many things in my life, what I viewed as a catastrophe was the best thing that ever happened to me.

I had a one-way ticket to the Army after I'd graduated. I was commissioned a second lieutenant. They sent me to Fort Polk, Louisiana, where I taught young men how to be, I won't say warriors, but soldiers at least. In my mind, for every ten men in the Army there's one warrior. Nine people support the warrior. Warriors are people that face the enemy day to day on an hourly basis, and fight to the death. I really didn't want to be down at Fort Polk, Louisiana. I wanted to be with the 1st Brigade of the 101st Airborne, the Hatchet Brigade. The 1st Brigade of the 101st — that was one of the first units in Vietnam, and occasionally we used them. The 101st jumped in Normandy and fought its way to Berchtesgaden. It was a very romantic unit. And I'd known people in it. My ROTC colonel had jumped with the 101st into Normandy. He taught me a lot as well.

I volunteered five times for Vietnam. I was rejected every time. I think the chain of command at Fort Polk wanted me to stay at there, because they thought I was doing a good job training people. I called my father, who was a Whiz Kid, and he called his close friend, Howell Estes, a four-star general who commanded the military air transport system. Hal had roomed with Barsanti, who was commanding general of the 101st. A week later I had my orders and was on a plane.

CK: *You were in Vietnam for how long?*

CN: About twelve months and a day or something.

CK: *And I know you earned a Silver and a Bronze Star.*

CN: Two Bronze Stars, for valor, a Silver Star for gallantry in action, an Army Commendation Medal, Air Medal, Purple Heart, and a combat infantry badge. I was supposed to get the Vietnamese cross for gallantry. I was promised that, and they said the paperwork would catch up, but it never did.

CK: *Never has.*

CN: Never has.

CK: *And what was most significant about that experience in Vietnam for you?*

CN: Oh, it was the seminal experience of my life. It was a combination of beauty and horror. We fought in I Corps, which was in the northern part of South Vietnam. I was assigned to the 1/327, Company D. I commanded the third platoon. The 1/327 had walked into the A Shau Valley, having a series of gunfights every day. It was like the gunfight at the OK Corral. The quickest live, the slow die. The unit that I joined thought it was pretty good, because it had won most of its engagements, but they hadn't been in combat yet and were fools. We were given orders to go north in the valley on about my second day there. We went in a landing zone and all of a sudden received heavy artillery fire. The company commander, who I later called Captain Afraid, was not a good leader. He'd been too kind to the men. He'd lie to the battalion commander and move the unit slower than he should. He was very popular, but he was almost on a first-name basis with them. While he was kicking in an artillery crater, he told me to go across the field to get to the wood line. It was stupid. My platoon would have to cross a field with pre registered artillery. Captain Afraid gave us a death sentence. Well, I lost 45 percent of my platoon. The man in front of me was blown away in half. And all around me people were without legs, and limbs were everywhere. I got my first Bronze Star for that action. I continued to stay in the field and help the wounded, and then load people onto the helicopter, where the man beside me was cut in half from another artillery shell. We then went after the guns. And we went to the Dong So ridge line. It was a horseshoe. The other side of the Dong So was the Dong Ap Bia, which would later be called Hamburger Hill. So we were doing, in essence, reconnaissance for Hamburger Hill, which was the bloodiest of the battles in the Vietnam War. Ted Kennedy said it had no purpose. It was officers collecting medals.

The A Shau Valley was the major infiltration to South Vietnam. The North Vietnamese Army staged Tet from there. We should have gone into Laos and fought like von Clausewitz would have fought. But instead we sealed off the Dong So ridge line while the North Vietnamese Army were resupplied from Laos. They were in fortified positions, would not run, and wanted to kill as many of us as possible. There's a book about it: *Hamburger Hill;* there's a movie, *Hamburger Hill*. There are two toy soldier sets that were made for the Vietnam War. One was the 101st at Hamburger Hill and the other was the 82nd in Pleiku. Our job was to go attack, in platoon strength, a heavy weapons platoon in stone bunkers. That was why we suffered such high casualty rates. My platoon was the first one up that ridge line. We ran into this big passageway surrounded by boulders. I remembered the Battle of Cannae, where Hannibal destroyed three Roman legions. It was catastrophic. He trapped the Romans in a valley where Carthaginians totally surrounded them. They couldn't form their shield wall. If I had entered that passageway it would have been like the Battle of Cannae. There were machine guns at the end of the passageway. I went up it with Corporal Ebert. It was a trap. We retreated. I ordered the second squad and the third squad to maneuver right. We only had less than twenty men in all three squads. We were probably up against forty or fifty. And then they brought in new men from Laos. We started taking casualties.

Sergeant Dillon, who was my platoon sergeant, led the second and third squads. I pulled back so I could direct all three maneuver elements. I hit the ground hearing mortars; a mortar round landed six inches in front of my face, but it cooked off. I ran behind a rock. The next mortar round exploded, and I was riddled with shrapnel. I still managed to help evacuate the wounded. I think we killed about seven North Vietnamese. The 2nd platoon went next and got hammered. They confirmed our KIAs. There probably were hundreds of North Vietnamese who died, because of the artillery we brought on fairly concentrated defense positions. I was medevacked. The other platoons went up the next day and the next day. I put one man in for the Medal of Honor. That's another story about leadership and how you can never judge a book by its cover.

Needless to say, when you go through war you learn a lot about yourself. You learn how to deal with fear. You learn how to put yourself in harm's way where you are a nanosecond away from death. I almost died three times: First with the time the artillery rounds exploded in the field; second, when I was loading people and the artillery cut people in half around me; and third, on the attempt to get to the summit of the Dong So ridge line. War changes you. It alters your perspective about life.

CK: *In what way do you see this as preparing you for the life you eventually led? What did you take from this experience that you think—*

CN: I've talked this over with a number of other veterans, like Nate Fick, who wrote *One Bullet Away.* The Army teaches you to live in constant preparation for battle. You have to have three alternatives for everything: one, if it goes right and it's a great victory; two, if you have to struggle; and third, if it's a catastrophe. So when I'm driving downtown I always have three alternatives for anything that can happen. I do the same thing when going to board meetings. This is a very good thing, but it makes you a very difficult person to live with. You're always consumed with overcoming adversity and averting catastrophe. And you live your whole life like that.

The other thing you learn in war is "Never say die." No matter what happens. You have to keep on pushing. And when you start a company, you can never say die. Because if you do, at the first difficulty you encounter — one of thousands you will face in the future — you give up. And entrepreneurs have to have that type of vision and sustainability.
When I look back on the Vietnam War, although most disagree with this, we won. The war started in 1945 in Greece, where we fought the Communists that were invading the country. It went throughout Africa, went throughout South America, Central America, Korea, Vietnam, Laos, and Cambodia. But at the end of the day, the Berlin Wall fell. Washington only won three battles of thirty-eight, but he won the Revolutionary War. Who knows what role Vietnam played in those series of battles where we outlasted, out-technologied the Communist empire. If you look at Vietnam today, it's South Vietnam that's succeeding. And the North just has the army. The domino theory was real. The North Vietnamese almost conquered Cambodia. If we had not kept them occupied for fifteen years, they would have rolled up Southeast Asia. Finally, the leaders in the north

were barbarians. After we left, they killed two million people. Syria is a cakewalk compared to those butchers.

HARVARD UNIVERSITY MBA 1969-1971

CK: *Chuck, you finished your service in 1969 and then, according to the record, you enrolled in Harvard.*

CN: Harvard Business School. So how did I become a venture capitalist?

CK: *What made you choose to abandon your dreams of writing and pursue an MBA?*

CN: I loved the excitement of romantic heroes. I have theories about how such people come into existence. I find it exciting to be around people who want to dare disturb the universe. That quote comes from T.S. Eliot's *The Love Song of J. Alfred Prufrock.* "In a room where women come and go, talking of Michelangelo, do I care, do I dare disturb the universe?" So entrepreneurs, like Thomas Sutpen in Faulkner's *Absalom, Absalom!* or *Lord Jim*, by Conrad, which is my favorite — he tried to disturb the universe and failed. And so I really found it exciting.

When we were on the Dong So, we were out of the range for artillery support. We couldn't get helicopter support. The only thing we could get was F-14 fighter support, because of the distances. We were alone in a sea of enemies. The F-14 had to do in-flight refueling to support us. We were sharing them with Khe Sanh, which was under attack. It was hard to get F-14s. And lo, I look up in the sky from that Hill — an F-14 had just been shot down in front of me — and there are three F-14s being refueled in flight. Flight refueling was my father's last company with Laurance Rockefeller. There were two approaches to in-flight refueling. One was a hose and a drobe for fighters. The other was the Boeing boom for bombers. Curtis LeMay said there'd be no wars fought by soldiers anymore, it was all going to be in the air. He was wrong. The Air Force knew it. They kept Father's equipment. Of course it has been used in every war since. You can only win on the ground. You can't win from the air. To me it was an example of how to change the way the world is. And I said, Well, what could be a better life? And I finally caught on.

My father was an engineer. He described his job as being a consultant, even though he was working for what is now called Venrock, because he'd go in and try to help the companies. He was a venture capitalist. And I said, What could be better than to be around these immensely exciting people (entrepreneurs, i.e., romantic heroes) all your life? My life would be filled with passion to create, because you need passion if you want to change the way the world is. I look back in my career, and I made the right decision. I have been around romantic entrepreneurs that wanted to change the way the world is. Now some of them are crazy as loons. And that goes to a theory I have about ADHD. I think, like Richard Branson, 30 percent of entrepreneurs have ADHD; 65 percent are hypomanic. The hypomanic bounces along, being elated all the time and has limitless energy. He does many things and can do seven things at one time. Five percent of entrepreneurs are bipolar. These three types of people have common brain chemistry; neoepherin to serotonin, to the release of dopamine. People speculate that the dopamine creates a level of hyperactivity. You believe you can do anything and are invincible.

CK: *While you were at Harvard, did you find any mentors? Was there anything that was exciting you, any stimulating classes in particular during that period?*

CN: Pat Lyles was a mentor. Georges Doriot was a mentor, although he left Harvard and was running AR&D. I wanted to get a job from Georges Doriot at American Research and Development. My father's company, Reaction Motors, later became Thiokol, was the first public offering that Doriot had had at American Research and Development. It was a big deal to him. Father takes me in there and says, "General, would you consider hiring my son as a summer job at AR&D?" Doriot looked at me and he said, "No. I don't hire English majors. We want people with scientific backgrounds." I developed a relationship with him and saw him a couple of times more. Later when we started NEA, we shared a lawyer with Doriot named Dick Testa. Dick Testa told General Doriot about how he made a mistake by not hiring me. The general wrote me a letter and he said, "Well, Dick Testa, whose opinion I highly value, says we made a mistake by not hiring you. I guess with you starting your own venture capital firm, that may prove to be true." He said, "I want to give you something. What I'm giving you is the name, New Enterprise Associates. That was the first name I chose for American Research and Development, but we changed it, and it's now yours."

CK: *So just backing up a little bit. You finished Harvard in '71. What were your plans for a career at this point?*

CN: I was going to be a venture capitalist.

CK: *Oh, you had already decided?*

CN: I went into Harvard knowing I was going to be a venture capitalist. I worked for two angel investors during the summer. My thesis was *Financing Change: The Role of a Venture Capitalist.* I was seeing companies on a regular basis when at Harvard. I worked for two angel investors, Dick Hall and Danny Perse. They'd made quite a lot of money. We'd drive around Boston, seeing these companies while I was in school. I was being a venture capitalist. With my thesis, I had to interview all the people that I knew in the business. I got to know Peter Crisp at Venrock, Dan Gregory at Greylock, and twenty others.

CK: *That's a wonderful way to get at them.*

CN: Well, also I'd grown up around them.

T. ROWE PRICE ASSOCIATES 1971-1977

CK: *So then what happened? You graduated Harvard and—*

CN: T. Rowe Price was getting into the venture capital business. They hired me to develop a plan for entering it, assemble a team, and get the legal documents done. Unfortunately T. Rowe Price couldn't come to grips with letting people in what would be called a subsidiary to have a direct profits interest in that subsidiary. They felt that the profits interest should go to the firm and everybody in the firm should share based on their ownership. That may work in the mutual fund business, but it doesn't work in the venture business where venture capitalists, at that time, got much lower salaries and made their money on capital gains (carried interest). Then the energy crisis came, and T. Rowe Price, which had been minting money as a growth stock investor in the Nifty Fifties, ran upon hard time. They had to use all their money to pay off retirees, and then the new generation would own the company. And so they scrapped the plans to get into the venture business. I just couldn't let that stop me. I told them that I was going to start a firm.

I met a man by the name of Howie Wolfe. John Nehra, who at that time was at Alex. Brown, introduced me to him. Howie Wolfe was one of the three principals at Landmark Ventures. Landmark was the Deere family's money manager. Howie said, "If you can put together a team, I'll give you four and a half million dollars." We were trying to raise twenty. T. Rowe Price said, "Well, we'll give you a million bucks," which happened to be 17 percent of the net worth of the firm at the time. T. Rowe Price today is worth billions. So I set about building a team. This was March of 1977.

CK: *Okay. So you had been there six years.*

CN: Yes. My first wife was related to a fellow by the name of Frank Bonsal. Frank worked at Alex. Brown. He'd helped to create their presence in small company investment banking.

IPOs. They were one of four investment banks later called the Four Horsemen, which really owned the IPO business. And he was the ultimate originator, a finder of companies. I would travel with him. He would go into a phone booth, pull out the yellow pages, and start looking for companies to call and see if they were looking for money. He was quite a remarkable character with a great sense of humor. When the energy crisis hit, Alex. Brown's IPO business decreased in volume. Frank, who'd been a hero, suddenly looked like a fool. A lot of these companies' stock prices came way, way down. Frank was getting dissatisfied because he did not have a dedicated fund and had to syndicate all his deals.

NEW ENTERPRISE ASSOCIATES (NEA) co-founder 1977 - 2012

CK: *During these six years at T. Rowe Price, were you making a lot of contacts?*

CN: I would go around and I'd meet every venture capitalist in the country. They would be happy to spend time with me, because I was a potential buyer of the IPOs. I ran an independent section of the New Horizon fund called the Incubator. I was really making venture capital investments in companies that happened to be public, during the bull market that preceded the collapse when the oil crisis occurred. I had, like, a 60 percent compound annual rate of return in this little fund. It bought venture-backed companies that had just been killed when the stock market collapsed. That's also how I met Dick Kramlich. I'd worked for Cub Harvey, who at that point ran the New Horizons fund, which was the small company fund. Cub introduced me to many people, like Pete Bancroft, Charlie Lea, and, of course, Dick Kramlich. And Dick and Cub had known each other when Dick was at Gardner & Preston Moss and Cub was at T. Rowe. They'd both followed a company called Scope, and it had been a very successful investment. I made a point every time I was in San Francisco, which was six times, eight times a year, to have dinner with Dick. But Dick could not be a contender as a partner early on for NEA because he was with Arthur Rock. Arthur Rock is a difficult gentleman. He basically said, "Dick, if you do this, I'm going to cut you out of the partnership, and you won't get the carried interest." I talked to Dick and sought his advice. Frank and I really were not established, or with track records, but Dick was.

Originally, we had another third partner, Jim Morgan from AR&D. In June '77, we go out to raise money. The day before we're to start making calls, Jim Morgan calls and says, "Well, guys, I hate to disappoint you. I can't be a part of this, because I don't want to leave Marblehead, Massachusetts. I don't know really whether I want to be an entrepreneur." Later he did. He started a firm called Morgan, Holland. But that, again, looked like catastrophe, but it was the best thing that ever happened. Frank and I are raising money on our own. We have five and a half million dollars. We get the Roberts of DeKalb to commit $500,000. Then Phillips Petroleum, introduced to us by T. Rowe Price, says they'd do the whole fund. The people we were talking to weren't the people making decisions.

At that time, Arthur Rock makes the decision to wind down Arthur Rock and Associates, which was his partnership with Dick. That frees Dick up, and in December of 1977, he joins us. And we have the three partners. NEA would not have gotten off the ground unless someone with Dick's stature had joined, because Frank was a retread investment banker and I was a junior analyst at T. Rowe. We made a good team. Dick was in the deal flow of Silicon Valley and well established. He was a consummate investor. I had been planning the structure of a venture partnership for six years and had strong beliefs about the culture of the firm. We were totally different from other venture capitalists. Frank was the consummate bird dog. He would go on and originate some of NEA's best investments. We became a pretty effective team. The interesting thing is that two weeks after Dick had agreed to go with us, he was approached by Gene Kleiner and Tom Perkins and was asked to be a partner of Kleiner, Perkins, & Kramlich. He said, "Well, I don't know why I'm doing this, because you guys are already the hottest thing in Silicon Valley, but I met these two fellows from Baltimore. I think we work well together. I'm not going to take your offer."

CK: *Chuck, how did you end up based in Baltimore? We haven't touched on that.*

CN: I tried to get a job in Boston. Greylock, all the other venture capital firms turned me down. Every Harvard Business School graduate wants to get a job in Boston. Second, there are very few jobs in Boston. Third, the Boston firms like to give jobs to Boston people. Then T. Rowe Price interviewed students at HBS. They were looking for someone to invest in small emerging companies. I was interviewed by Bob Hall and Tommy Broadus, who were both senior T. Rowe Price people. They said, “Oh, we’re really looking for someone to help get us into the venture capital business.” Bingo. I would go to a mutual fund company and plan their entry into the venture business.

CK: *And you were going to be in Baltimore.*

CN: I was going to live in Baltimore. It was important to me because I had Marsi move so much in my life. I wanted a place to have roots. And my wife, Marsi, was from Baltimore as well. T. Rowe Price was as important to me as the Army was, in many ways. The firm had outstanding ethical values. They were one of the first no-load venture firms. The no-load structure of a mutual fund was what led me to come up with the fee structure for NEA. I had an opportunity to do what I did at Penn, which is totally control my own schedule. I could go off and do anything I wanted, fly anywhere in the world, see anybody. T. Rowe Price would open all the doors. And I got to know everybody in the venture capital business. I often invested in companies that were losing money but happened to be public. That is how I got to know Dick and Frank.

T. Rowe had made an investment in a company called Terminal Communications Inc. Frank Bonsal was also an investor. Kirk Miller, who was then chairman of the board at T. Rowe, would take me down to the TCI board meetings, so I met Charlie Lea of New Court, who really knew what they were doing and was TCI’s lead investor. One time we were at dinner with the board, and Kirk asked me to give my opinion about a problem that

TCI was facing. So I start to speak. Frank interrupts and says, “Hey, Kirk, what are you having that boy talk for, he doesn’t know anything.” (laughs) That was my first personal introduction to Frank Bonsal. (laughter)

CK: *Okay, and by ’77 you’re starting a venture firm with him.*

CN: At the time we started working, we both had an interest in the same thing, venture capital. We’d go to see many companies together.

CK: *So what was your vision for NEA initially? Is there a mission statement?*

CN: Yes. And it was very simple. We wanted to become the J.P. Morgan of the venture capital business. We wanted a firm that would last a hundred years. There were three things we wanted to accomplish: We wanted to produce extraordinary results for our limited partners. And we wanted to create companies that were built to last, companies that would change the way the world is, not companies that were speculative bubbles. Now, in the venture business, of course, you make some investments in speculative bubbles, and sometimes they make you a lot of money. NEA has benefited from those companies as well. Over the years, NEA has started 800 plus companies. I don’t know what the combined revenues are, but I know the companies that I was involved with now have $140 billion of revenues. We really did change the way the world is, which was another one of my objectives.

CK: *And why did you decide to operate bicoastally?*

CN: One, Dick didn't want to move to the East Coast. Two, 80 percent of the companies were where he was, not where we were. Dick could be on the board of twenty companies, because he only drove five minutes to each company. It would take me two and a half days to go to Parkersburg, West Virginia.

CK: *What was the division of labor between the three of you?*

CN: The three of us made every decision together. Frank and I would fly to California every two weeks; Dick would come to the East Coast often. Frank and I were traveling six and a half days a week. Dick traveled much less because he had so many companies in his backyard.

CK: *And did you each have a different responsibility in any sense, or wear different hats? Because you were saying how you each brought something different to the partnership.*

CN: We had no managing partner at that time. Frank liked to invest in a broad range of industries. Eventually he focused on technology and energy. Dick was health care and technology. I was health care and technology. Eventually we would specialize in a single industry. Dick focused on technology, I focused on health care. It was impossible to get Frank to focus. Dick became managing partner in 1982. He didn't want to take the job at first, but it was obvious that he had the experience and the network and really should be leading the firm. It worked.

CK: *Were there any tensions between the three of you? I mean, it's hard to—*

CN: There was a time when Frank and Dick got into a serious argument. I think Dick felt that Frank was too hyperactive. Frank was ADHD and has some other issues. He would take calls in a board meeting, which would drive Dick crazy. I can remember working it out with Dick. We both sat on the board of Chomerics. The company had just built a building with a little rooftop garden where you could have lunch in the summer. Dick and I were sitting in the garden in the evening. I was sitting in full lotus position, and we were having a serious conversation. We worked it out and Frank stopped taking calls at board meetings. Did you want to talk a little bit about NEA and how it differed from other venture capital firms?

CK: *Yeah. I want to know about letting NEA grow.*

CN: We were really quite different from the rest of the industry

CK: *Okay. Then let's go with that.*

CN: We wanted to have aligned incentive systems. Our total focus was on capital gains. Our fee structure was different than the rest of the venture universe. We focused on the customers' yachts. There's an old story about J.P. Morgan taking a young job applicant, a young partner, to the New York Yacht Club. He toured the dock with the young partner, and he would say, “This is my partner so-and-so’s yacht.” He did this three times. The young man looks up to him and says, “Where are the customers’ yachts?” NEA focused on the customers’ yachts. We did a good job for both our limited partners and our entrepreneurs. If they made money, so did we. We created an entrepreneurial-friendly venture firm. Eighty percent of the company’s deal flow came from people we had worked with for years. We adopted Dick’s “never say die” culture. Today we have an awards ceremony for entrepreneurs that make us money. The entrepreneur will end up crying and hugging the NEA partner who sat on his board, because we’ve been through the wars with them and they love us for that.

We wanted a non-hierarchical firm, where the youngest partners could be treated equally and speak openly. By the time NEA III rolled around, the founding partners only had 35 percent of the carried interest. I would say that in other partnerships that have achieved equal things, the founders might have had 80 percent of the carried interest through the first six or seven partnerships. We chose to run NEA like a corporation. That was good and that was bad. We had one partner who convinced us to adopt a four-year vesting schedule. It matched the “investing life of the partnership.” What really happens is that you invest in four years and you build companies over the next eight years. Over time we asked several partners to leave. Because of the short vesting schedule, in the early partnerships, much too much money went to people who played no role in creating the value. I wanted a twelve-year vesting schedule, and initially we had it. We changed it until we realized we made a grave mistake. We changed it back. I think it's now a ten-year vesting schedule.

I was very sensitive, I did not want to create a firm with a lot of politics, one where you could lie and take credit for other people's accomplishments. We wanted to have a deal team, as opposed to a deal king. If we made any mistake it was we didn't keep track of origination, we only kept track of who the project manager was. We often gave some of the best companies we found to young partners, to help their careers. Transparency was important to us. I knew one VC firm whose only communication with the limited partners was a Christmas card. We would publish reports all the time, maybe three feet of paper in a year. Quarterly reports contained the most recent financial information for each company and a discussion of operations. We sent them to our limited partners. This was the day before the Internet. NEA was the most transparent in the industry. We had a board of directors. You're not allowed to have a board of directors in a partnership. So we created an investment committee that functioned like a board. That investment committee has played an enormous role in the success of our partnership. Most venture firms don't have a board of directors. Limited partners do not know who is getting paid what. LPs are not informed before a general partner is fired. Limited partners do not get involved in major strategic decisions. At one point the NEA investment committee approved our salary levels, which was totally unheard of in the venture industry. The reason we did this was because when we invested in a company, we went on the board to provide governance. We felt that being on the board provided good discipline and helped the companies succeed. We wanted to put ourselves under the same discipline. People like John Ridell from the Insurance Company of North America, Bobby Nicole of Kleinwort, and Hal Bigler from Connecticut General helped us a lot. A whole group of those early investors helped make NEA what it is today.

I'll give you an example. Merck approached us and wanted us to do a health care only venture with them as the sole investor. That was a great compliment to a bunch of liberal arts majors. We had a discussion with our investment committee. Bobby Nicole said, "You can only work for one master." And all of a sudden the decision became very clear. Merck would have been driven by its own corporate interest, which may not have created the best investment results. NEA has always tried to identify paradigm shifts. I had written a paper at T. Rowe Price that identified the paradigm shifts in many industries. Dick later came up with the term "paradigm shifts" years later. I predicted how the communications industry would change when the Bell monopoly was broken. I predicted the formation of the biotech and medical device industries. When we started NEA, there hadn't been a communications company created in seventy years. It was clear that the Bell monopoly was coming to an end. Those were the days of the Mickey Mouse phone. That was the only independent communications company that could survive. You weren't allowed to get near the switching, the central office, where all the routers and the high-speed digital communications are now going. Once the central office started to be open to independents, technological change accelerated geometrically. We made a number of communication investments. I call that wildcatting. It's like in oil; you go to a new area and try to discover an oil field. We hit a couple of gushers, and then we did exploratory drilling.

Our first communications company led us to another, which led us to another, which led us to another. Likewise the pharmaceutical industry had not had any new entrants for fifty years. The biotechnology revolution changed that. So we sought to identify basic paradigm shifts and then exploit them. We did that with the Internet. Peter Barris identified UUNET, a network that had 70 percent of the Internet volume. UUNET was an example of how we worked as a team. UUNET was this big buyer of communications equipment used to run their network. We had a new company, Juniper. Dick Kramlich was on the board. It was Peter Morris and Mark Perry who brought that company into NEA. But Vinod Khosla, from Kleiner Perkins wanted Dick on the board because he had worked with Dick before. Dick is intimately involved with Juniper. He calls up Peter and says, "Can you give us a good introduction to UUNET?" Peter introduces Dick to Mike O'Dell, who is UUNET's chief technological officer. UUNET gives Juniper the biggest order you can imagine. UUNET is the industry leader. The next thing you know, Juniper's off and running, because every other communications company followed UUNET. That's an example of how the partnership worked together to create value. Mike O'Dell eventually joined NEA as a venture partner.

CK: *How did you raise money for your first fund? It seems like you had a lot of connections, but you're like a new kid on the block with these more established firms, and you're in Baltimore.*

CN: It was done with great difficulty. We started out in March of '77, and completed it in June of '78.

CK: *So that's fifteen months.*

CN: Right. Without pay. Actually, Dick was still working for Arthur during that period of time. Frank was paid by had Alex. Brown. But I was totally unemployed.

CK: *Out there.*

CN: I had $300,000 that I'd made doing venture investing in Boston. I really used that to get NEA started.

CK: *You are a risk taker.*

CN: John Ridell [INA]. It was an introduction from Ezra Zilkha. These were very famous people at the time; John ran their illiquid investments, and Ezra was on the board. Frank knew Ezra. I brought in Landmark, the Deere family. I knew the family (DeKalb). I got T.

Rowe Price to invest. I knew Bill Robinson, the CEO of Harland Company. T. Rowe Price introduced us to 3M, and they invested. Dick introduced us to Hal Bigler at Connecticut General. Dick knew the Mugar family in Boston and the Ball family of Muncie, Indiana. Frank got Kleinwort, and the bank invested. Frank knew the Ford family and they invested. We saw everybody in the United States during those fifteen months. We'd make a hundred or more calls a week. We'd travel just continuously. There are many funny stories about our failures: Hughes Aircraft, Phillips Petroleum, William Blair & Company. Bud Meyerhoff, Ross Perot, the U.S. Trust. Jack Dorrance of Campbell Soup, Jack Pearlstone in Baltimore, Bill Lickle of Delaware Trust, Berwind Corporation, the Marshall Field family (Frank's cousins), the Prince family that owned the Chicago stockyards, J.P. Morgan, Merck, Robinson Humphrey, Peter Lawson Johnston, who created Vail, Duncan McMillan, Cargill, Bob Levy in Baltimore, the USF&G insurance company, Alex. Brown, Bagley Wright in Seattle, and Barring's Brothers in London. Those were a few of the names and the sales calls we made.

CK: *How successful were you?*

CN: I'd say for every fifty people we saw, we got one. It just was a matter of perseverance. At the end of the day, they invested because they knew one of us individually. I got most of the money through the contacts I'd formed while at T. Rowe Price, with all of these CEOs. Bob Krieble, who founded Loctite, was an investor. Loctite was a company that I'd followed when I was an analyst. When I look back on it, I'm amazed that we were able to pull it off. To be fair, we wouldn't have pulled it off without Dick. Cub Harvey had said, "You and Frank are fine, but you have to get that third partner that really is credible." When Dick joined us, the dream became a reality. Every night when I go to sleep I say, "Thank you, Jim Morgan, for not moving to Baltimore, because we never would have had Dick had not you pulled out."

CK: *What excited you about this work?*

CN: I look at the Internet, which Peter Barris helped to create. He recruited John Sidgmore in as CEO. And Sidgmore was the guy who made the company. Sidgmore would not have been there without Peter. The Internet has changed the way we live. It's changed the role of women in society, because they can work out of the home. Over the next hundred years, it will make it impossible for dictatorships to control information. There still probably will be dictatorships, but the Internet will try to destroy them. It's changed the way we do business. It's changed how we sell things. It's changed how we look for our health. Every aspect of our lives is affected by the Internet. I remember the first time I saw it. It was at one of our annual meetings, in the late eighties or early nineties. Stewart Alsop was our guest lecturer. He later became a partner. He had a big 24-foot screen, and we surfed the Net. The Net was crude at that point in time. We went to a Swedish professor's Web site and got a tour through his house. We saw what he was publishing. We realized that this was a technology that would change the way the world is.

Advanced Cardiovascular Systems was one of Dick's companies. He gave it to Neil Bond, I think, to sit on the board. But Dick really originated the company. He may have sat on the board, too. I'm confused. Long time ago. Advanced Cardiovascular Systems pioneered balloon angioplasty. How many friends have I had who've had balloon angioplasty? We founded many cardiovascular companies — exploratory drilling. One of my best friends was saved by balloon angioplasty and got to live to seventy years when he could have died at fifty. The venture business gives you the chance to make money. In the mutual fund business, you just make money. Being an entrepreneur, you get emotional satisfaction and you get to make money, but you only do one thing. The venture business lets you get some of that emotional satisfaction by changing the way the world is, lets you make money, but see a lot of different things.

The trick in the venture business is doing what I call being able to look around the corner. Because the pharmaceutical industry has existed for a hundred years, and there have been no new start-ups in the last fifty, doesn't mean it's a place to avoid investing. Because the communications has been hostile towards innovation, doesn't mean that that's not going to change. As Mr. Price said, "Change is the only certainty." Look at something and see something that is not there yet. That is what Dick did with 3Com, the inventor of local area network, the Ethernet. It was the predecessor of the Internet. We went to 3Com company. It was a consulting company run by this entrepreneur, Bob Metcalf. We started talking to Bob's head of marketing. All the marketing guy wanted to talk about was which debutante parties had Frank and I been to. Dick says, "I want to invest in this company called 3Com." We said, "You must be an idiot. Here you have this engineer, Metcalfe. He has this social butterfly as his head of marketing. The company is a consulting company." We invest, Dick recruits in the right CEO, and the rest is history. The company becomes the creator of the Ethernet. Now the San Francisco baseball stadium is named after 3Com

CK: *Can someone learn to be a good venture capitalist? Is it a science or is it an art?*

CN: It's both. I think seeing around the corner is an art. It's an apprenticeship business. NEA — it may take ten years to become a health care general partner. You can do it in technology faster, because the results come in earlier. You go through a period of three years where you're helping in due diligence. Then there are seven or eight years where you invest in companies and sit on the boards. You learn a lot. People who taught me— I was so lucky to be mentored by many different people in the venture business. Paul Wythes, Bill Edwards, Charlie Lea mentored me. Charlie Lea didn't know he was tutoring me, but he certainly was. He pulled the plug at Terminal Communications. Dan Gregory, Charlie Waite from Greylock were my mentors. I had a chance to work with all of them. Dick was my most important mentor. Frank taught me how to originate deals the old-fashion way. Now deal origination changed over the past thirty years. When we started out we were the new kid on the block. We didn't have these long-standing relationships. We hadn't financed 800 companies that refer future opportunities to us. We had to go to trade shows, rip pages from phone books, and visit other venture capital firms asking for deals.

Early on I learned that you had to establish a reputation for yourself in an industry, like I did in health care services or Dick did in communications. If you start one successful health care service company it leads to another, which leads to another, which leads to another. Eventually anybody who is starting a health care service company has to see me. When NEA was started, I wanted to create a band of brothers like the 101st in World War II; or the story of Leonidas and his three hundred at Thermopylae. We were a band of brothers. Now NEA has evolved into a corporation. When you have fifty or sixty investing partners, you change or die. You can no longer be transparent to all the young partners. The management challenges of creating NEA changed regularly at each stage. We went from a group of generalists, to specialists, to teams with a network of venture partners. Each decade, what takes to make the firm successful, changes.

CK: *Was there a decision to let NEA grow as big as it's grown? Was it a conscious decision?*

CN: Very much so.

CK: *How'd that come about?*

CN: Actually it was Tom Judge, a key NEA limited partner. Around the time of NEA IX, we started making investments that were what we would eventually call venture growth equity.

CK: *Is this in the nineties?*

CN: Yes, the late nineties, around the time NEA X was being formed. NEA was always known as a late-stage investor, which was so ridiculous because 80 percent of our investments were start-ups. But for every dollar you put in a start-up, you have to put eight dollars into financing later rounds. For example, we started to do these venture growth investments (VGE). Most of the health care VGE investments were start-ups like Pharmion. Jim Blair introduced me to that company, asking me to go on the board. I gave it to Jim Barrett, because he had the experience that I lacked and the technical background. It started out as a seed investment. It was a specialty pharma company and you had to acquire assets. In the early years we would have started Pharmion and participated a little less in each ensuing round. In Pharmion's case, we participated more in each follow-on round. We ultimately invested $50 or $60 million in the company.

CK: *Why'd you do that?*

CN: Because it was a magnificent investment. And as a matter of fact, a lot of times with health care you go through investing at the same value as these companies mature. And it's only when they get to phase three or product revenues that they reach an inflection point and the value takes off. You do not do this in consumer Internet. You can start a company with $6 million if you do it in the right market and get it to profitability quickly. In medical devices, in biotech, in communications, in energy you must invest hundreds of millions to get to profitability. The theory was that venture growth equity would take less time to reach liquidity. Let's go back to Tom Judge. He was sitting in one of our investment committee meetings, and we were talking about what we were doing. He said, "You know, you're doing something different than you've done in the prior twenty years." And he said, "Explain it to me." And that's when we came up with the term VGE and started making these big commitments to companies we started.

Many venture firms are driven by building a $200 or $300 million company and making money on it. The consequence of having big dollars is that you have to have billion-dollar outcomes. Now when I last looked at it, NEA had sixty-five to seventy billion-dollar outcomes in its history. I mean companies whose market capitalizations were in excess of a billion. Caremark had a market cap of $60-plus billion. With these big funds, you have to have those things where you have significant ownership to pay back the fund. We're still in the business of starting the companies. I calculate that it takes $200 million today to start a pharmaceutical company. And then the industry has changed so much. It's an entirely different business than it was when we started out. It's the same yet much, much different. The technical skills which you need to be successful today are so much greater. NEA health care's team has twenty-three people. Thirty percent are MDs with one to three other degrees and often ten to twenty years' experience. Eighteen percent of them were CEOs or COOs of companies like Johnson & Johnson, Guidant, and MedImmune. Some of these people are venture partners. The tech team is equally well staffed. NEA started off with what I call two monkeys and an organ grinder. Now the partnership has the depth and talent, like the medical team. The technology team is equally staffed.

CK: *So you've invested at this point — in my notes it says in 650 companies. It's probably more.*

CN: No, it's 800 plus.

CK: *Eight hundred. And how many have gone public?*

CN: About 174. And 350 have been bought.

CK: *You've cited quite a few of your investments. Chomerics and 3Com.*

CN: Chomerics I was on the board of with Dick. 3Com was Dick.

CK: *I'm just wondering if there's a memorable story about one of these companies; about the entrepreneur you worked with; a challenge, whether it was a success or maybe not, that's instructive of how venture capital works. In general, what are you looking for when you vet a company? What about the leadership?*

CN: We described our investment criteria in our first prospectus. They really haven't changed to this day.

CK: *Okay. That's interesting.*

CN: Management. People are the most important factor in the success of any business. General partners must be able to judge the entrepreneur's ability by the caliber of people he attracts, his appreciation for finance, his willingness to delegate, his integrity, his ability to make difficult decisions, and his strategic orientation towards the chosen market. An entrepreneur's record of prior accomplishment and thoroughness of business plan and the shortness of it are often excellent indicators of his potential. Fertility of the field. Primary demand should be increasing at least in excess of 20 percent annually, hopefully closer to 50 or 100 percent. Primary demand growth is much more than gaining market share. Primary demand exists where a product process of service will be more frequently used by current customers, will benefit from varied usage of current customers, and will attract new users. Distinctive competence. Usually evaluated in terms of patent, trademarks, manufacturing know-how. This is the factor that refers to the ability of a company to defend itself against price competition, combined with a plan to capitalize on a unique opportunity. Barriers to entry are an important part of distinctive competence. Therefore, you can have distinctive competence or barriers to entry in a service company, like health care service company, when you get to a certain mass. Real value of the product. The product, process, or service must satisfy a real need of the customers. In this sense the word 'need' is not limited to economic benefits derived from cost savings. Market leadership. Return on capital. Recurring revenues. Freedom from government accounting or interference. Conservative accounting. Willingness to accept counsel. Vin Prothro, who was one of our partners for a while and a great contributor to NEA, said that when you encounter an entrepreneur with cement ears, you have a real problem.

CK: *Those were your criteria for—*

CN: Investing.

CK: *Did you ever think you were right, and you were wrong? Did it ever work out that you had not —*

CN: I'll give you two examples. My personal experience. I was right and I was wrong. Right in a big way. Wrong in a big way. Around 1983, and we had a limited partner by the name of Earl Linehan, who's the father of Chip Linehan, who was a partner with us for a while. Earl runs the largest private nursing home. Is one of a group of people. He's a good friend who helps me evaluate health care service companies. I got a business plan that had been sent to me by Matt Makowski, a Citicorp venture capitalist. Earl and I go down to Birmingham, Alabama, to see a company called HealthSouth. The company started out as an outpatient rehabilitation therapy company. Now this company, for every dollar that you spend in rehab, you save twenty dollars. We invested. The company entered and soon dominated the outpatient rehab therapy market. HealthSouth created what would be called integrated health care delivery system. This meant combining a surgery center, primary care, and imaging and diagnostics. In an outpatient facility you could do 80 percent of what a hospital does. Coincident with that, we recognized that medical devices were changing the nature of surgery. You went from open heart surgery in a hospital to balloon angioplasty in an outpatient facility. At some point in time, all those complicated heart procedures will be able to be done on an outpatient basis. So we saw that as the driver of the trend. We were creating the company that was the twenty-first century alternative to the hospital, that would operate at a fraction of the cost. When you go to Johns Hopkins, you encounter forty people — eight in billing, two are caregivers — and the footprint of that place is enormous. When you go to a surgery center, you encounter four people, two of which were caregivers. While on the board I worked closely with this CEO, Richard Scrushy. He becomes the rock star of the health care service business. The company grew to $5-plus billion in revenues. The company had excellent customer ratings, and the quality of service was fantastic. Wonderful. I think I've backed one of the great men of American business. But he had a weakness. He was a crook.

In the course of our relationship I helped Richard a lot. I diagnosed his second wife with bipolar disease. I made sure they didn't do a convertible data offering, which would have raised the debt load. This later enabled them to go past the competition. They did a straight equity and then followed it with a convertible offering. Everyone else in the industry did a convert and then could not access the equity markets again for at least five years. I would spend twenty to twenty-five days a year with HealthSouth. Every year we did four days of strategic planning. We'd attend the award ceremonies. We'd have meetings in facilities all over the country. I really identified with this company, and it had led me to a lot of other companies that we invested in. The stock starts to drop after twenty years. The company starts to have earnings problems. Richard offers dubious explanations. It is always the government's fault. Billings are a problem for health care service companies. It's a very complicated thing, because you bill at *X* and you get paid at .5 *X*, and there are lots of opportunities for bad billings. When the stock dropped to three dollars a share, NEA considered doing a leverage buyout of HealthSouth. We had never done a leverage buyout. And FBI finds out that Scrushy, working with five chief financial officers and thirty people in the finance department, had been moving cash around so he way overstated the company's cash position and way overstated his profit margins. We fire Scrushy and then enter into about a two-year battle to save the company. The old board consisted of people that knew the health care service business. The new board were what I call Princeton professors of compliance. They didn't understand the health care service business. Scrushy basically had a mission to transform the American health care system. His crimes destroyed that. He destroyed a lot of the people. He had 50,000, 60,000 people working with him. A director, Joel Gordon, who started the surgery center business, was responsible for saving the company, although a lot of people worked with him. I was one of them. A group of the board had to testify in front of Congress.

CK: *Why did Richard do what he did?*

CN: He was totally self-centered, focused on himself, and he was greedy. Towards the end he stopped focusing on the company. He got waylaid by people in the entertainment business.

And he produced a golden record in country music. I think he started cheating with nickels and dimes. Then it became millions of dollars and then hundreds of millions of dollars. We found out that he was not a good guy. I'd been duped by twenty years, although we succeeded in changing the health care business. The other story is about Amerigroup. Amerigroup is a Medicaid HMO, founded by Jeff McWaters. We start this company. At first the results don't look so good. We expand by acquiring health plans. Amerigroup case managed the Medicaid patient, saving large amounts of money.

CK: *And is this in the nineties?*

CN: HealthSouth was in the eighties. Amerigroup was in the nineties. You know the Medicaid population, it is expensive to handle. Crack babies cost a million bucks. If you pay the crack baby mother sixteen bucks every time she visits the doctor, and she comes on a regular basis, you can keep her off of crack. So for the cost of maybe $300, you can reduce your probability of crack babies immeasurably. You provide better care to the Medicaid recipient. So Wall Street believes no company servicing the Medicare population can make money. We try to go public three times. On the third try we made it.

CK: *How did the company come to you?*

CN: The company came to me because I worked very closely with Sage Givens. We had ten investments together. I'd brought her a hundred things. We'd been on so many boards together. She said, "I need more money than Acacia" — her partnership — "can provide.

We need an NEA." So we backed Jeff together. There were a series of one step forward, half a step back; two steps forward, one step back. We needed capital, because an HMO has a certain capital requirement to start an operation in a new state. We grew, and then the company became cash flow positive and we were able to fund our own growth. Over the years, the company grew to $6 billion in revenue. It was sold recently for over $6 billion. Amerigroup made a measurable contribution for treating the Medicaid population.

Unfortunately, whenever a health care service company innovates and saves money, the government comes in and changes reimbursement. Our government does not like health care companies that make money. NEA did the same thing in the Medicare business that we did in Medicaid with a company called Bravo. Chip Linehan, a young partner, came up with the idea of adult daycare facilities. We called the company Elder Health. Adult daycare was a flop. It takes you three years to get enough people in a facility to break even. If you're expanding rapidly, you have tremendous negative cash flow. So we got rid of the facilities and started an HMO. Then we turned our HMO into a case management company for the elderly. Medicare means you're eighty years old, you have seven chronic diseases, and your family's not around much. You forget to take your meds. Every other month you go to the hospital, the nursing home, or the emergency room. The emergency room is really expensive. The hospital's expensive. The nursing home is not cheap.

We have to fire the founding entrepreneur. He was a good man, but just over his head.

Chip then hires Jeff Folick, who was number two at Pacific Care, a big HMO. We rename the company Bravo. When Jeff joined Bravo it had $300 million in revenues. Next thing you know, Bravo has $2 billion in revenues. It grows 100 percent every year. Bravo picks up the Medicare patient, takes him in a cab to a community clinic or a primary care physician. The patient stops using the emergency room, hospital, and nursing home, we call every week to see that he is taking his meds. Bravo has meetings with his family on a regular basis to make sure they're involved in taking care of the patient. The Robert Wood Johnson Foundation does a study. They claim we save 70 percent of the cost of health care in the last three years of life. Health care in the last three years of life is 80 percent of total health care cost. We save 56 percent of total health care cost, with much better patient outcomes. We have high turnover because these people don't live long. We lose 20 percent of our patient base every year. Then the government comes in and says, "The Medicare Advantage plans are suspect for making too much money." We made more money than other HMOs, but we saved the country so much money. Today Medicare Advantage is still an open issue, but Obamacare will probably seriously reduce reimbursement, killing the goose that lays the golden egg.

CK: *That's a great story. How emotionally do you get invested in these ventures? And maybe it's changed over the years.*

CN: No. The venture capital business is the only equivalent to combat that I've known. It is life and death, and perhaps more so for me, because I tend to be the romantic and get so involved with the causes these companies are taking and push them to grow and be successful. I went through the HealthSouth situation, because I had severe post-traumatic stress disorder I was back in the valleys in Vietnam. When normal people attend a business meeting, it is just a meeting. For me each meeting is a fight for my life. I've had six post-traumatic stress disorder episodes: Vietnam, my first wife's suicide, and HealthSouth. After 2000NEA almost fired the health care partners. I gave my carried interest to the young partners to keep them at NEA. We totally re-staffed our health care team. In NEA IX and X the health care companies generated far better results than the tech companies. They helped us create this venture growth equity strategy. It's good to be diversified.

CK: *If you're emotionally involved with what's happening in the company, do you also have a personal relationship with the entrepreneur?*

CN: Very close.

CK: *Your grandmother told you — (laughs)*

CN: You're always judging that person on the performance. But if you don't have a personal relationship with them, how do you have credibility? You can say, the entrepreneur wants to go right. He's convinced about it. And you've got to change him to go left. So unless you have a personal relationship— I don't think my grandmother said—

CK: *Well, I was just saying that she kind of wanted to — it sounded as if she wanted to toughen you up against a sensitive side.*

CN: She wanted me to face adversity like a warrior and erase it.

CK: *She must have recognized that.*

CN: She knew me too well.

CK: *Well, she said you were like — you were a son.*

CN: Right.

CK: *I just thought that these are very emotional— To get involved in these companies, they're like children.*

CN: That's correct. You have to be dispassionate and passionate at the same time. That's one of the things that Dick does so well.

CK: *He can do that? Have you ever had to fire one of your entrepreneurs?*

CN: Fifty, at least.

CK: *Do you ever get used to that?*

CN: No. Occasionally you get someone who's really a bad actor, like Scrushy. Most of the time entrepreneurs are well-intentioned, work tremendously hard, but some think they can drink their own bathwater. They drive off a cliff doing something that, from a business standpoint, is foolish.

CK: *How has the venture climate changed between the late seventies and the early eighties and today?*

CN: The venture capital business is in great danger. From my work with Harvard, I believe that the venture industry has created 90 percent of our economy. People think it started in 1970, with Intel, Apple, Genentech, and Amgen. But there was an institutional venture capitalist by the name of Andrew Mellon, who in 1880 funded, from start-up, Gulf Oil, Carborundum, General Reinsurance, and Alcoa Aluminum. IBM was funded by Sherman Fairchild, bringing in Tom Watson, from National Cash Register, to run the company. IBM was a venture-backed company. Eastman Kodak was a venture capital-backed company, funded by an angel group. 3M was funded by Lucius Ordway, an angel investor. Stevens and Company was a merchant backing that funded small start-ups. When John Walton wanted money to start Walmart, he went to Stevens and Company. Laurance Rockefeller funded the start-up of Polaroid, Eastern Airlines, McDonnell Douglas, Thiokol, Cessna, and Aircraft Instruments. I could go on and name another bunch of companies, like Thermo Electron, that Laurance funded before he arrived at Apple and Intel. There are four hundred books written about the Rockefellers. Laurance is mentioned in the footnotes of four. The history of the VC business is entirely oral. Most firms don't keep records. You have to go back and look at the corporate histories to see that these companies were created by venture capital.

It's an important business for the future of this country. In 2005, there were 1,025 venture firms. They raised $110 billion that year. Clearly there was too much money in the industry, the leftover from the bubble days. In 2012 there were 750 firms remaining that raised $12 billion. But of those 750, 300 will never raise money again. So the venture business funding is down 90 percent from its peak. Employment in the VC industry is down at least 50 percent from its peak. In the health care side, the number of firms is down 80 percent from the peak. I think there are only four firms in the country now that can do pharmaceutical financing through clinical trials to commercialization. Now there are lots that can start them, but big pharma deals are necessary to get the company to a product launch.

During the nineties, if I'd given a lecture to a hundred entrepreneurs and asked them what they wanted to do, 75 percent of the people in the room would have said, We want to build the next IBM. We want it built to last. I bet you if we went in the same room today, 90 percent of the entrepreneurs would say, We're building to sell, not building to last. I think you've had a change in the younger generation of entrepreneurs. I think in the Paul Wythes and the Bill Drapers, a lot of those VCs that you've interviewed so well over the past five years, you saw they wanted to make money, but they were in the business for other reasons as well. They sincerely wanted to do good things by creating companies that contributed to society. So there's been that change.

Another problem was the capital markets. The Glass-Steagall Act used to limit bank leverage to three to one. During the mortgage crisis, it went to hundred to one. If you had one million of capital, you could loan a hundred million; before you could only loan three million. To make it very simple. When Spitzer, the former New York attorney general, went after the investment banks, he created a wall between the investment banking department and the research departments. They used to work in concert. Clearly there were conflicts of interest. But the unintended effect of the separation was that analysts could only follow companies with billion-dollar market caps, because there was no longer the investment banking incentive. Another factor was the demise of the Four Horsemen. The Alex Browns, the Hambrecht & Quist, Tom Weisel, the Montgomery Securities were sold. Sarbox came in and just dramatically increased the cost of going public, again, with good intentions. I don't think Sarbox has done much to stop corruption. The whole culture of the country has gone towards casino capitalism. This means you bet on when people are going to die, rather than the next IBM. Financial crisis, the bubble, Dodd-Frank all contributed to the demise of the capital markets. OTC brokerage commissions were decimated, destroying small company investment banks and 30,000 brokers who followed and sold these stocks to institutions and retail investors.

Another problem is that our immigration policies are idiotic. This country has been created by immigrants and innovation. Half of the NEA partners now are immigrants or sons or daughters of immigrants. The best and the brightest come to the United States. They create a company that may have $200 million in revenues in three years, and then they get expelled from the U.S. They're not allowed to stay, no matter how much they contribute. I believe we ought to have an immigration system that gives such people ten-year waivers on taxes if they really succeed and do something. We're driving away some of the best immigrants, while we're letting in ones that can't contribute to society and are supported by the government's dole.

The FDA has eliminated a half of medical innovation by putting safety before efficacy. We've had only one or two companies get FDA approval in the device space in the last ten years. A company that I'm involved with treats epilepsy with a stimulator, much like a pacemaker. Each year it costs about $25 million to run the company when you're in clinical trials. The company claims to have met its end points in phase three about three years ago. The FDA evaluator is a dentist with no background in neurology. She uses the company's method for statistical analysis and says the company doesn't meet its end points. Neuropace has the people who created the statistical analysis methods for epilepsy. They point out that her methodology was flawed, leading to the false conclusion. She says she doesn't care. We appeal it to the FDA. They bring together ten neurologists. Unanimously the panel recommends approval to the FDA. We're waiting to see what would happen; waiting costs us $75 million. That happens time and time and time again. It is driving the device business, and eventually the pharmaceutical business, overseas. The regulatory climate is much better there.

CK: *You can do it as fast—*

CN: Within three to four years. The approval process isn't as difficult. They let you go to market in a staged, phased way. In the U.S. most of our clinical trials and product introductions are delayed. Let me give you an example of the cost of that delay. Hopkins used to pride itself on academic purity, and therefore a scientist wanted to publish everything. It was a palace of vestal virgins. Dialysis was discovered by Hopkins in 1906, but they did not patent, and no commercial firm would launch a product without patents. It was commercialized as a service business, not as a device, by Harvard in 1976. Between 1906 and 1976, at least three million died of end-stage renal failure. The cost of slowing medical innovation is human tragedy. Put all I've just said and that's where the venture business stands today.

CK: *So you're saying it's getting harder and harder to do these things that'll change the world; that will improve the quality of life for people, and it's just regulations?*

CN: It's all these things combined. Casino capitalism, where people don't invest for the long term. You know what the average holding period is for, like, 70 percent of the trades? It's something like four to eleven seconds. The jobs act took a step in making it easier for financing companies. I think there's growing awareness that a lot of these things that have been put in with good intentions have terrible side effects. They may cure the headache, but they kill you the next day. I'm optimistic, because I think everything goes in cycles. We've started to see a recovery of the IPO market. One thing that hasn't changed at all is innovation. Innovation is geometrically growing. Putting money into basic research is sort of a joke, because it takes a penny to do basic research, and it takes ninety-nine cents to commercialize. So you could have basic research pumping out more and more potential products. The ideas are there, but nothing can be made of them. The country will be like Johns Hopkins, creating the innovation but never doing anything about it. It is harder to succeed in commercialization than it is to succeed in the basic innovation.

CK: *I hope your optimism is well founded and it is a cycle. Because it is a different generation and different ways of doing things.*

CN: I was referring to that. Take the young partners at NEA. For ten years they have borrowed more and more to fund capital commitments. Because they haven't gotten any distributions from these partnerships, they borrow. You have to recover capital before you share in the gains. So one thing that is very important is, for the limited partner, carried interest virtually doesn't hurt returns. Sixty percent of limited partner returns are hurt by the fee. Thirty percent, or thirty-five percent, hurt if you do not recover fees. Five percent of the return is hurt by carried interest, or 10 percent. Let me give you an example of that. Let me take an extreme case. You have a venture firm with 30 percent carry, a 3 percent fee, and the GPs don't have to recover fees. The firm has a hundred million dollars. Three percent fee over ten years is 30 percent of the contributed capital; 30 million goes into the fees. You don't recover fees. Which means you got to start to share as soon as you recover 60 or 70 percent of the fund. That's the equivalent of another 10 percent. That's $40 million of the $100 million partnership not going to investments. Take a structure like NEA. The fee is 1 percent; you have to recover fees, pay back a hundred cents on the dollar. Ninety percent of the dollars go to investments. It creates an alignment of interest between entrepreneurs, investors, and the general partners. Because the entrepreneur wants capital gains. The investor wants capital gains. If a firm has $10 billion under management and a 3 percent fee, you can get rich off fees. You don't really need the carried interest. And there's a lot of talk about size in the venture business. The Kauffman Foundation, which was created to promote entrepreneurship, is trying to kill the venture business by saying returns are bad. They have no accurate data. They're making statements that just are absolutely untrue, because they were unsuccessful investors in venture partnerships. Whenever things look bad, there's always someone who jumps on and tries to make it look worse.

CK: *Okay, Chuck. We're back from lunch. Thank you so much. Always interesting to sit and talk to you about venture capital and learn about it from your point of view. So, tell me, why did you retire, because someone said to me, "Chuck Newhall, he's never going to retire."*

CN: I don't think I've retired. I've retired from NEA. When the health care service investing returns declined, people lost interest in investing in that field. Because the government, soon as you'd create a great company — reimbursement is changed and the entrepreneur's company is destroyed. I switched back to biotech investing, but the world had gone past me. You need a stronger technical background than I have in order to be a competent biotech investor. I questioned whether I could pull my weight in that environment. The second thing was that NEA has been very successful. We've raised $14 billion for fourteen funds. The next generation in the firm has to move up the ladder. If the old ones stay there, there's no carry for the young partners and few chances of increasing salaries. I have done things at NEA that were not in my economic interest. In 2000, during the bubble, the health care team almost was fired; I gave up half my carried interest to the younger people to make sure they were incented. We cut the health care team from twelve people to four or five. In retiring, I lost a lot of economic benefits, but it was in the best interest of the corporation. The final thing is that physically I have been going downhill because of my back. Being a VC requires a lot of travel. When I was with NEA, I'd be flying to California, to turn around in one day because you have a company going bankrupt. Then I'd have a problem in New York. It was a real pressure cooker. I wanted a chance, to be in a position where I could be involved with venture capital, but not be in the firing line for the critical emotional decisions.

CK: *I'm going to back up a little bit because I want to talk to you about board memberships, over the years. I'm wondering, how much time did you spend when you were on a board, with the meetings and the emails and the strategy, the hand-holding? All the things that go into being a board member.*

CN: I've been on fifty boards of directors.

CK: *Oh, my. We have pages here listing your board memberships.*

CN: HealthSouth took more time than any other board. We had very productive meetings. I got to know everyone in the company. Four days a year where you'd discuss long-range planning. You could evaluate management by how they achieved their long-range goals. There were many telephone conferences. The company acquired a lot of companies, so you'd have to have a telephone conference call or a face-to-face meeting for each one of the acquisitions.

When a company goes public, you usually switch to four board meetings a year, versus twelve that you might have with a start-up. One company I invested in attempted to create a health care service company that controlled morbid obesity. It was called Nutritional Management. It was exercise, diet, medical practice that controlled morbid obesity, which are so expensive to the system. The CEO and his board chairman, who are very accomplished people, had a philosophy of "build it and they will come." They built it, and no one came. The more the facilities were empty, the more they wanted to build. We had a very heated argument over that. They threw the keys at me and walked out. And I was sitting there with another venture capitalist, Chuck Hartman, and we literally had to run the company for a period of months, until we could bring in a new CEO. I moved to Boston. I'm a member of the Somerset Club, and I stayed there for months. You cannot predict how much time a board will take. Each company is a unique thing

CK: *So it varies over the time you're involved.*

CN: It depends on the stage of the life the company is in. Are you public or not? Is the company in trouble? When a company is in trouble, your time commitment goes way up. When you replace management, your time goes up. I've been on the boards of fifty companies. Each one was a different story and a different level of commitment that changed over time.

CK: *But it sounds like it was a very large part of what you did.*

CN: I'd say 70 percent. A lot of people would say, 70 percent. How do you have time to look at new projects? When I got to a certain point in my career, I sat on the boards of fifteen, twenty health care service companies. Any health care service company doing a financing would come to me. Many deals came out of board relationships. I often worked with Sage Givens, and she brought me Amerigroup. I'd sat on a board with Matt Makowski; he brought me HealthSouth. And then HealthSouth introduced me to CompHealth and a whole bunch of other companies. Being on boards was where I did my deal originations.

CK: *That's interesting. I haven't heard that. So you mentioned the bubble. And how did NEA fare during that period?*

CN: Very well and very poorly. Because we'd been in UUNET, we were in all these other companies — Juniper, Ascend Communications. We got the benefit of bubble performance. In the year 2000, we'd raised NEA X. We'd transferred some of the health care partners to the technology team. They backed companies that were too highly valued. We lost somewhere between two- and four-hundred million right off the bat in NEA X by investing in overvalued companies. We fell in love with our own propaganda. When NEA X started, health care was supposed to be 10 percent of the fund. It ended up being 40 percent. Health care will probably account for 50 percent of the gains in that fund. I haven't done the study, I'm just guessing. In NEA IX, health care was about 8 percent of the fund. We brought it up to somewhere around 14 by reinvesting. It will account for 60 percent of the gains. The fund will be the only underwater fund in NEA's history.

CK: *What's the takeaway from that bubble and burst? Of that period for NEA? Did you change your strategies in any way?*

CN: We put health care back at 40 percent of what the firm did, up from 8. But I don't know if there's any cure for what happens in a bubble. The young generation comes in, they can see this bubble happening, and they make investments. They think they're geniuses. One of our young partners invested in a company called Xiros. Eight months later it was purchased by Nortel. We made about $600 or $800 million in seven months. They plugged the device in and it blew up. Nortel's stock plunged from sixty-five to five-eighths.

CK: *Okay, we're talking about the bubble and what you all had learned.*

CN: I would say the question is, are we making the same mistake in consumer Internet projects or SAS projects today? After the bubble, we let go about five general partners. We thought their companies were barn-busters, but they disappeared overnight.

CK: *But you were saying that you think that this is happening again.*

CN: No, I'm saying there's no way to prevent it from happening. In a bubble, people are so successful that they lose perspective and think the good times will last forever.

CK: *You're saying it's going to happen in the consumer—*

CN: No, I'm saying it could happen. It hasn't begun to happen yet.

CK: *I think you've answered this question, about how the climate has changed with more competition. Venture capital has changed. This new generation of venture capitalists is different than the pioneers who started when you did.*

CN: It isn't competition.

CK: *Well, the competition in terms of the entrepreneurs. The entrepreneurs could pick their venture firms. Before, you were looking up in phone books and trying to get— Is that true?*

CN: I think for a firm like Venrock, say in 1975, they probably had entrepreneurial relationships just like NEA does today, when you had started 870 companies, deals are referred to you. Companies come to you because of who you are. It takes years to build those relationships. When we started, the business wasn't like that.

CK: *Is it different today? Starting a venture firm today?*

CN: Oh, it's much more difficult. The money coming into the industry has gone down 90 percent. The number of firms has gone down 60 percent. To start a new venture capital firm today, you have to be unique.

CK: *How do they compete with the established go-to firms?*

CN: With a firm like Andreesen Horowitz, you have two famous entrepreneurs that attract investors. Netscape was Andreesen. They have all these industry connections.

CK: *So they have to start out with a network in some way.*

CN: You don't get two monkeys and an organ grinder out raising money, like we did for NEA I. (laughter)

CK: *About this new generation of venture capitalists, do they have that sense of a band of brothers that you had when you were starting?*

CN: No, I don't think they have that. They don't build to last, they build to sell. But you have to remember that some of these people have been in a twelve-year bear market. A lot of them haven't known the good times.

CK: *You worked with Venrock or Oak, or you had—*

CN: There are close relationships. I don't think the environment is conducive to the cooperation between venture firms, like it was in the past. On the health care side it is collaborative because you have ten-year time horizons. On the technology side, it's incredibly more competitive.

CK: *So do you need this band of brothers? Can you do it on your own? Do you have enough funds to do it on your own in a way that the companies didn't have at one time, when you needed to raise funds?*

CN: Well, if you're in a firm like NEA, you have the funds and you have the connections to put a syndicate together. You're much better off than a new fund, which doesn't have thirty-year relationships.

REFLECTIONS

CK: *We're going to look back a little bit and just reflect on a career and on venture capital. The first thing, I want to have you just talk about venture capital as a romantic quest. You've often used the word "romantic" or "romance" in your writing.*

CN: You're around people like Steve Jobs. I followed Jobs's career. I haven't read the book yet, but I'm going to. He started Apple in a garage. He built the first prototype. He had a vision for the business and a vision for the products. He was a difficult person, yet he had a vision and he was able to inspire a company to pursue it and to do marvelous things. Remember, he was kicked out of Apple and then came back, I think it was five, ten years later, and he still had the vision and the drive to take Apple to the heights that it is today. The question is, will the company's ability to innovate continue without Jobs. With the stock taking a 40 percent decline in the last several months, a lot of people think that vision is lost. So to be around those people is very exciting. And I look back at what we've accomplished, say in health care. Balloon angioplasty, ACS. Rational drug design, Vertex. Therapeutic lymphokines, Immunex. Restrictive and modifying enzymes, Life Technology. Human gene therapy. Genetic therapy. Medicaid managed care. Amerigroup. Medicare managed care, Bravo Health. Pharmacy benefit management, Caremark. Balloon sinuplasty, Acclarent. Chirally Pure pharmaceuticals, Sepracor. Cancer therapeutics, Pharmion. We're now involved in epigenetics. If that science works it is going to be as important as recombinant DNA. You name all these various different companies where you've been involved, they've been great money-making enterprises, but they've been led by entrepreneurs who had a vision and took you on a romantic quest. They're stimulating to every aspect of your life, to be involved and to help make happen, in your own little way, you contribute to the creation of things that change the way the world is. If that's not a romantic quest, I don't know what is.

CK: *Then you feel that the romance is still there in the industry.*

CN: Oh, yes.

CK: *Are there any venture capitalists that you would cite that you greatly admire?*

CN: Oh, dozens of them. Paul Wythes, who recently passed away. Charlie Lea, Peter Crisp, Tony Evnin, Jim Blair. Jim is one of my very closest friends. Tony and I have worked together for forty years. Bill Edwards. Jim Cavanaugh. Wally Steinberg. You have to remember that venture capitalists are nothing more than financial entrepreneurs, so they have the same characteristics as the entrepreneurs they fund. Dan Gregory at Greylock. So many of these people in other firms have been so helpful to me as I progressed through my career.

CK: *Chuck, what do you think has given you your self-confidence in going through?*

CN: Vietnam.

CK: *Interesting. Why do you say that?*

CN: Because if I could survive that, I could get my way through other difficult spots. By the way, whoever's going to transcribe this, the noise is coming from a dog.

CK: *And this dog's name is?*

CN: Gracie the pug.

CK: *Do you ever stop and think there'd be something else you might have enjoyed, or been successful in doing something entirely—*

CN: Well, I've been trying to write all the years. I haven't generated a success yet. That was a career that wasn't open for me. I can't imagine having worked and not been a venture capitalist. I find it hard to put myself in others' shoes.

CK: *Through all these investments and all this time and energy, how do you see your contributions to our economy, to the way things are today?*

CN: Well, to have the companies I was associated with have market caps of over $140 billion, that means something, I suppose. But I was involved with many companies where I was not a director. I did the due diligence on Advanced Cardiovascular Systems. Balloon angioplasty. I talked to fifty different physicians. Twenty-five believed in it, twenty-five did not believe in it. They thought restenosis would occur and you'd have to do balloon angioplasty over and over again every six months. Of course, it didn't. Restenosis was a problem, but not as great a problem that my references claimed. I almost had to flip a coin to make the decision. What I did was listen to the conviction in the words of the doctors who were in favor of it. One group had passion, the other group had analytical detachment. I ended up believing in the group with the passion. I wasn't the person on the board or the person who originated the deal, but I felt I made a contribution towards the investment and thus towards the creation of balloon angioplasty.

CK: *I would see these as your rewards in your work?*

CN: Well, there are two types. There are monetary rewards, and I certainly have been blessed in that way. And then there is job satisfaction, feeling that you've worked for things which made a difference in people's lives. I have a lot of that. Just like in Vietnam, I think, in some little tiny ant-size way, I played a role in bringing down the Russian empire. So my grandmother always said, "Don't have little dreams." And so I've been lucky — I've had lots of dreams shattered. Everything that she said came true.

When I go back and see how we opened the conversation— My grandmother said, "You will trust people who betray your trust. Each betrayal will take away a piece of your heart and your mind. You will dream greatly, suffer greatly, to make your dreams reality, only to see them vanish in the sand like sand in an hourglass." "Remember, greatness is a vision, nothing more, an ephemera. Strive for greatness, but never set your heart upon achieving it. To be unhappy is a sign of weakness." So I can go on, all the things that she told me.

"Do not show emotion, but preserve them. It is our emotions that bind us to humanity. Virtue, not happiness, wealth, or power, is character and a way of living. To win virtue is the only real path to happiness. We compete throughout life not with others, but ourselves. Continue to remember, but cease to mourn." Those were the guidelines in my life.

CK: *Thank you for sharing that. I think you've answered a lot of what I could follow up with. But you say you haven't fully retired. How are you staying involved?*

CN: Both my sons are in the venture capital business. So I'm working for my oldest son, Ashton. And he started a venture film called Greenspring Associates. Remember that with my first wife's suicide, they had post-traumatic stress disorder and severe learning disabilities. So we were told that both children had a 95 percent probability of ending up in jail by the time they were twenty-one. With the help of my second wife, Amy, we raised these boys. And they were analyzed by Dr. Regina Cicci, who won the Orton Award for learning disabilities. She studied them throughout their lives. Ashton started his firm at the age of twenty-six. He has two and a half billion dollars under management. Twenty-five percent direct venture deals and 75 percent in venture funds. Adair was involved with two start-up companies. He became the favorite of the CEO of the companies. One was a $650 million outcome, the next was $550. He went on to Darden, and he's now working for Jim Blair at Domain, who I think runs one of the best, if not the best, health care venture firms in the country.

I say my greatest achievement has been, with the guidance of my wife, raising those two children to success. I'm in touch with them on a daily, if not weekly, basis, both of them. And we spend an enormous amount of time together. So that's one task, working with my children in their professions, which was my profession. The other task — I have several — is the Baltimore Museum of Art. I've been on the board for thirty-five years. Baltimore has lost its wealthy citizens. It's lost its corporate headquarters. If we don't build an endowment for that institution, it'll go away. I've been leading a campaign for endowment, for reinstallation of the collections, for gifts of art, and planned giving, that so far has raised about $130 to $140 million, which is four or five times the amount raised for any other eleemosynary institution in Maryland.

One of my greatest projects has been putting together this collection of VC interviews and a history of the venture capital business. It will be written by Felda Hardymon, Josh Lerner and Tom Nichols. The venture industry has driven the economic progress of this country, and it's largely unrecognized. In order for the industry to be saved and preserved, a recognition of what it has accomplished over its 200-plus-year life, it's important. Hopefully this book will provide that. The history of venture capital is all oral. And with the help of you, Carole, and Mauree Jane Perry, combined with the Bancroft efforts, we'll have close to seventy venture capital interviews. You've put down a portion of the economic history of this country that would have otherwise been lost.

I have my interest in a garden, which is a little bit obsessive, to say the least. It's taken thirty-five years to do. A photographer spent ten years taking 15,000 photographs of the garden. They had a show on the garden at the Baltimore Arboretum, Cylburn. I did two lectures. I did the first in Baltimore. I hope to give them in New York and some other cities.

I'm still trying to write the great book. I send it to publishers, getting consistent rejections, but refusing to give up. I travel a lot. And I've read three books a week for most of my life, and I continue to do so. So I'm very happily occupied in a number of diverse tasks.

I have two things I regret, which were big goals. I wanted to improve capital formation that caused the problem for the venture capital industry. We started an effort called Inside Venture, where we hoped to be able to have the major institutional investors that want to invest in emerging companies do so on a private basis and then be there for the offering. It's an effort that was ultimately acquired by Second Market, which is indeed providing a secondary market and I think will soon get into primary offerings. I wanted to solve the problem of Sarbox and all the casino capitalism. I think I made a contribution towards that, but that problem still remains unsolved. The other big challenge that I tried to do was to raise an endowment for the Baltimore Museum of Art. Baltimore and Maryland are becoming a third-world country. I wanted to try and save the BMA by combining it with Johns Hopkins. The BMA would be able to appeal to all Hopkins graduates, and Hopkins would get an art museum. They'd work closely together, which would enable them to play in the big leagues of educational institutions. Harvard has its art museum, Williams does, Penn does, Yale does. It would add a cultural center of excellence to the campus. Unfortunately the Hopkins art department felt that art after 1600 had no meaning. The Baltimore Museum is contemporary and modern art, starting from 1900. Many people at Hopkins, including the president, Bill Brody, disagreed with turning down a collaboration, but Hopkins had a policy that each boat must float on its own keel. The art department decided not to combine. You win some and you lose some, but always dream big.

CK: *But you've never lost your passion for all of this, it sounds like.*

CN: No. I will never lose my passion for having great dreams.

CK: *And so you were recognized by NVCA and given the American Spirit Award for funding and shepherding the beginning of this oral history project that's now funded by the NVCA and Harvard University — recognizing its importance. So I hope they can help.*

CN: I look upon Harvard as the archive for the history of venture capital, and the spokesman for why it's important to keep this tiny little industry alive. Remember, 400 firms now that are ongoing entities; say an average of six people per firm that are investing partners. That's an industry with 2,400 people. You say there are also the angels — so you double the number or triple it. It's still a little atom on a planet, but it helps make the planet. The little atom makes the planet. That's why it's so important.

CK: *Is there anything that I might have overlooked in this story that you'd like to add?*

CN: There are many things that have been overlooked, but I, alas, have lost my memory and could not remember them.

CK: *Anything you'd like to add? Because I think you've told a wonderful, inspiring story of your life and your time in venture capital. And it's interesting to see that your boys are following in your footsteps.*

CN: That's a great honor. How many people are lucky enough to have that sort of relationship with their children, given the hard times which we all had to go through.

CK: *It seems that your passion outshone the difficulty of your work.*

CN: Well, passion is a two-edged sword, like everything. When you are passionate about a great dream, you pursue it at all cost. When you're a warrior and you pursue your passion, you exclude the rest of the world; you focus on getting what needs to be done. That makes you a very difficult person to be around and to live with and to love. So all I can say is it's had its good points and its bad points, and I'm very lucky to have a family that has put up with me.

CK: *(laughs) Okay. I think that's a good place to stop. A happy ending for sure. Thank you so much for this time, and for this most interesting conversation. And thank you for Harvard. I'm sure they'll be delighted to have this story.*

CN: I thank you for making this project a reality. Mauree Jane got it started, but you really have made it real. I think you can look back with great pride — you've really done something important. It may not appear like it at this point in time, but I think twenty years from now, when this is all digested, that it will be something of great importance.

CK: *Well, I'm sure we'll be at that book signing.*

CN: Yeah, I want to be there when Tom signs his book with Felda, I want to be there.

CK: *Okay. I hope I'm there, too.*