

BAUHAUS LEGACY – INTERVIEW #3

Interviewee Name: Nevin Summers

Interviewer Name: Christopher Brown

Interview Date: 9/30/2025

Interview Location: Gropius House, 68 Baker Bridge Rd, Lincoln, MA 01773

Christopher Brown:

This is the Bauhaus Legacy oral history project, interview number three, with Mr. Nevin Summers. It is Tuesday, September 30th, 2025, and we are here at the Walter Gropius House in Lincoln, Massachusetts. So, to begin, can you say your name?

Nevin Summers:

Yes. First, I want to thank you, Christopher for inviting me to be part of this series. I worked out here for 10 years with Ise Gropius as her assistant, and it means a lot to be back here in this space for me.

CB:

Excellent.

NS:

My name is Nevin Summers.

CB:

And what was your profession?

NS:

Well, I've had several. I'm formerly trained as a molecular biologist, as an architect, and as a technology manager.

CB:

And when were you born and where did you grow up?

NS:

I was born in Gainesville, Florida on July 12th, 1949, and I grew up in Gainesville and Jacksonville, Florida.

CB:

And when did you make your way to the Boston area?

NS:

I came up here to go to school in '73.

CB:

Where do you currently reside?

NS:

I currently reside in Kendall Square in Cambridge, very near to MIT. I don't own a car. I'm able to get everywhere I need to go by walking or Zipcar, or Uber.

CB:

Now you've had a diverse and interesting educational background. Can you tell me a bit about that?

NS:

Yeah, let me just mention the degrees and when I got them. So, I want to preface by saying that in high school, I got very deep into science. This was during the Sputnik era, and I think citizens correctly realized that we need to train a new generation of scientists. So, science projects and competitions of that sort were very much encouraged for young people to be participants in. So, I went through all of that. I won the Westinghouse National Science Talent Search in 1967 as the first person in the nation, first prize. And so, when I came to Ise, I was already a practicing scientist. I had decided not to get a PhD at Stanford and had decided that I wanted to move into a different area, namely some form of the arts or architecture.

CB:

And you just mentioned your background in molecular biology, so let's start there. I'm interested in what drew you to that field and what does it mean to you?

NS:

Well, yeah, molecular biology is really how the gene works, and the gene is really the central element in life. It encodes all of the structural elements that the body uses. It's what's passed on to your progeny during fertilization, and all of the genes that are on your chromosomes are collectively called the genome. And the genome has been a very interesting topic of biological and biomedical research because it's really the key to understanding how the body works, how the gene gets expressed and when it goes wrong, what the diseases are and what therapies might be developed to correct them.

CB:

Now after your molecular biology studies, where did you next find yourself?

NS:

Well, I got even deeper into molecular biology when I was at Johns Hopkins, and I spent the last semester at Stanford, and after I graduated from Johns Hopkins, I went back to Stanford and worked for a year and a half and had applied and was accepted to a biology PhD program. But I felt that I had narrowed myself down too much and that I lacked the breadth that I really wanted. And I basically did an about-face. I gave up my slide rule and I came back to Baltimore and I enrolled in the Maryland Institute of Fine Arts program where I was there for six months. I had no real intention to get a degree, but I needed to reformulate what I wanted to do with my life. And I did a lot of drawing and painting. I did figures, I did still lifes, and I did landscapes.

So, walking around Baltimore painting landscapes got me interested in the built environment and thinking about what a career might be that would interest me. It seemed that architecture, whether it's landscape or building architecture, was an area that would allow me to basically take the skills that I learned as a scientist in terms of analytical skills and formulating hypotheses, and combine that with a knowledge of engineering, how to build buildings, how to build structures, and also most importantly, combine it with the arts so I could get the knowing, the feeling, and the doing in one career. So, that's what propelled me into architecture. I came up here and worked in the daytime at a job cutting blueprints, which was the only job I could find in 1973. In the evening, I studied architecture, drafting, art history, at the Boston Architectural Center. So, I did that for about six months and got tired of cutting blueprints and was looking for something more interesting and more aligned with what my architectural studies were. And through meeting Dr. Anneliese Harding¹, who is an art historian - she was at the Goethe Institute in Boston - I got to know her and she was friends with Ise Gropius, Mrs. Walter Gropius, and she knew that Ise needed a gardener, and so I volunteered to be her gardener. I quit my job cutting blueprints. I still continued to study architecture, but the opportunity to come and meet her and work with her, even if it was raking her leaves, was I thought well worthwhile. And I have no regrets doing that.

CB:

Now, to go back a little bit to when you were in school, that's a pretty radical break to go from the field of science into art. Was that an intentional move away? Were you getting burnt out in the world of science?

NS:

Well, I was. I mean, I think it was very troubling times. It was [the] time of the Vietnam War, social unrest. There was just, I burrowed myself into the ground too deeply and I needed to back up. I was working, there was no biotech industry, there was only academic science, [which] was what was in my future, and I didn't really see a role of doing that and working with things that are invisible. I mean an electron microscope, you can see DNA, but to the eye, it's just a clear solution, and it was very abstract. And I did well in it, and I'm a good lab worker and I'm a good team player. But it was time for a change. And at an early age - I was 23 - seemed like this was the time to make a change.

CB:

And it's an interesting transition to get into architecture because as you alluded to, my understanding of what you said, is that it was a perfect merging of these kinds of scientific thinking, very practical engineering-type ways of thinking, mixed with the visual arts and creativity.

NS:

Yeah.

CB:

So, architecture was sort of a synthesis of those...

¹ Obituary of Dr. Anneliese Harding, included by interviewee request: <https://www.currentobituary.com/obit/88546>

NS:

Yeah, I mean, ultimately you've got to build a building that has to stand up and you've got to have an understanding of structures, statics, how gravity works, how buildings respond to loads, including wind as well as gravity. You had to engineer and think about the climate, the heating, ventilating, and air conditioning, all the technology that's now part of modern buildings. So, you had to have an understanding of how the world works. It wasn't just an emotional, abstract expression, it had to be tied to the real world, and it had to be tied to the needs of the client and what their space requirements were, what their adjacencies were, what functions were next to other functions. And it ultimately has to fit in the cultural milieu that it's in and the environment; the passage of sun, the climate, all of that has to be integrated by a designer into a solution that meets all of those needs. So, that's a real challenge, and it is part analysis, it's part inspiration, it's part working with the client, and you have to try different schemes to find the one that works the best, which is like an iteration the way an engineer does iteration; you're basically designing something, building it, testing it, learning from it, and then redesigning it and going through that iteration to get at an optimal solution.

CB:

As far as architecture, were there any particular architects or architectural styles that particularly resonated with you?

NS:

Well, all of the classical architects interested me. The history of architecture is always very fascinating to me too. Going back to kind of prehistoric times. I mean, we originally lived in caves or we were nomadic peoples that wandered around. Coming forward, the history of architecture is built in a way that gets categorized in arrears as styles and is tied to different cultures and histories. Certainly, if you move up to the modern era, Gropius was one of those architects. There was also Mies van der Rohe, Frank Lloyd Wright, Le Corbusier, and then the century before there was H. H. Richardson, who's done a lot of buildings in Boston. So, I'm always around... Boston's a great architectural town because there's so many examples to walk around and see.

CB:

So, it sounds like you were equally interested in classic styles and some of these Modernist...

NS:

Yeah, yeah. And also, I was particularly interested in the impact of technology. So James Marston Fitch, who actually wrote a forward for a project that we'll talk about later, "Small but Perfect Things", wrote a book on American architecture and he noted that the invention, well, first of all, the advent of electricity, of steam power, of motors, of elevators, of structural steel that could go up to very high heights - all of these things made different forms of architecture possible. Without an elevator, we wouldn't have had high-rise buildings, it would just be too far to walk up. And in fact, most buildings in Boston were not higher than five or six stories which is as high as a fire ladder could get, in the case of a fire. So, that limited right there, the height. But with new technology, people were able to do different types of things. So, Louis Sullivan in Chicago was instrumental in the high-rise building. I mean, Chicago architecture is where a lot of that started.

CB:

Now, you had mentioned Ise Gropius and Walter Gropius. Do you recall in architectural school if Walter Gropius was taught, if the Bauhaus was discussed?

NS:

Well, it was when I took my architecture classes at the Boston Architecture Center that I was taking in the nighttime. By the time I got to Harvard in 1976, the world had moved on and Postmodernism was the rage. Deconstruction, basically tearing apart all of the rationality that the early Modernists had had. So, there's part of architecture that's a fashion, and there are always new Young Turks coming up that want to show their stuff. And it is just like, are you Punk or are you New Wave? There's always a classification that goes through and [is] sort of looking back on the past and not really studying it that much. I mean, reacting to it was more of what the norm was. So, I would say that while Harvard benefited greatly by Gropius coming to head the architecture department, and there's a Gropius lecture that they have annually, they'd moved on.

CB:

So, in a way, when you were studying the mid-century Modernism that came from Gropius and his contemporaries - you mentioned Corbusier and Mies van der Rohe - did that seem a little passé? They're moving into the Postmodern era and that...

NS:

Well, I don't think it was passé. I think in the studios, which the whole school was built... I went to Harvard Graduate School of Design [and] the school was built around design studios and art history and architecture history is something that's taught separately and it's done in a professional way, but as far as it being an influence in the studio, not so much. I worked with Gerhard Kallmann and my advisor was McKinnell. Kallman and McKinnell did the Boston City Hall, which you might be familiar with. They were modern architects. So, we would have discussions that related to modern architecture, but it wasn't promoted in the sense that this was a school that taught Gropius architecture, if there is such a thing. We can get into whether Gropius did a style or not later, if you want.

CB:

Now, was architecture school the first time you were made aware of Gropius and the Bauhaus, or was this something you were interested in and had learned about?

NS:

Well, I had gone to a lecture with a friend of mine at Johns Hopkins, a general lecture on the Bauhaus. So, I noted, I knew about it when I was maybe 19 or so. But more importantly, I took a German literature class where I learned about the Enlightenment, and this was a... I don't speak or read German, this was a class where the ideas in German literature were spoke about in English. And so, I learned about the Enlightenment and this going back to the Greeks for, as an example, not so much the Renaissance and the application of reason and science and technology to improve mankind, separation of church and state - these were all ideas that were in flow in the early 18th century. Benjamin Franklin, Thomas Jefferson were of that time, they knew all about this stuff as well. America is an experiment in democracy that was born out of the Enlightenment. And so, I saw the Enlightenment as a period where science and art were kind of coexisting in an amicable way. There wasn't a tension between them. They were both in the service of humanity. And that impressed me.

CB:

And there's an interesting connection there too, in that the Bauhaus was founded in the city of Weimar initially, which is known for the Enlightenment and philosophy...

NS:

Home of Goethe and Schiller. So, I don't think it's any mistake. So, in a way, what I see is that Gropius basically who was... he's a German, well-educated in the period that's post-Enlightenment, so he knew all of this background. And in a way, his coming to America brought the Enlightenment to America in post-industrial design. That's kind of what I see as his big contribution, is that this was now brought into the realm of mass production and construction that was of a technological basis different than what had been done historically.

CB:

Now, you mentioned before that you had a connection to Ise Gropius, Walter Gropius's wife. Can you talk a little bit about, when did you first meet her and how did that come about?

NS:

Yeah, yeah. So, I first met her in the spring of 1974, and I'd come up here to study architecture in night school. The only job I could get during the recession in, it started in '73, was cutting the blueprints. And so, I was ready to move on from that job and six months of cutting blueprints, smelling in the ammonia, and dulling a pair of scissors every week was not what I wanted to do. So, through meeting Dr. Anneliese Harding, who was an art historian in the Goethe Institute in Boston, she introduced me to Ise and I learned that Ise was needing a gardener. So, I was very glad to quit my job cutting blueprints in an engineering firm while I was still studying architecture, but come out here and work helping her with keeping the grounds in order.

CB:

You clearly had an interest in and a respect for the Bauhaus and for Gropius going back before this period. How did that feel when you got that offer?

NS:

Well, so I had read *Scope of Total Architecture* maybe about a year before I met her, and so I didn't recall that she was the editor of it. I knew Gropius had written the book, and that was part of my decision why I wanted to become an architect. Because I was experimenting, figuring out whether I really want to do this, and I was continuing to paint and draw and develop my visual skills as well at the same time. So, when I had the opportunity to actually come out to the Gropius House and meet her, I thought, gee, this is a perfect education.

CB:

Do you remember your first conversation with Ise Gropius?

NS:

Yeah. Well, I think she had just come back from a trip to Ireland opening an exhibit of her husband's. When Gropius passed away, which was five years before I met her, he passed away in '69, she immediately took the baton and started running with it and developed exhibits in multiple languages

that she would circulate around the [world]. So, that's when I met her. My first job when I arrived here, spring of '74, was she needed to rake the leaves and clean the lawn. So, I did that, and she said, "Well, you can go in town and get a lunch". So, I went in town and I didn't know where to go or anything, and I didn't think about bringing a lunch. And so, by the time I came back, it was a little over an hour, and she was obviously kind of annoyed with me, and I said, "Well, I didn't really know where to go", and everything. So, I think she realized a better strategy was to invite me to lunch. And so, I got an entree into sitting down with her and eating a pita bread toasted in an oven with butter and rosemary on it, which is what she loved to eat. So, that allowed me to have a conversation with her about architecture, about Gropius, about life here, and it was the start of a long relationship that lasted 10 years.

CB:

So, it sounds like your relationship with her became somewhat of a friendship?

NS:

Yeah. Well, it grew over time. So, I think she realized that I was a dedicated student, I was trustworthy, and I always came on time, and I always did what needed to be done. She had a newspaper clipping service that printed in six different languages over the world, anytime Gropius or a Bauhaus master, or the Bauhaus was mentioned. So, she would get these stacks of clippings that needed to be taped in and put into notebooks, and she had notebooks in the basement that went all the way back to 1910. And so, I started organizing all this flow of newspaper clippings that were coming in, and she saw that I was diligent and that I understood what they were about. And as we progressed, she also would take a nap in mid-afternoon and then have coffee afterwards, so we'd have coffee together. So, I had kind of two opportunities where I wasn't really working, but I was talking with her, and those were very educational.

And so, I was also studying at MIT, and I took a class on energy-conscious design. This was the time of the energy crisis and retrofitting buildings and making sure that they conserve energy was a very important thing. And so, for a term paper, I had to analyze the energy consumption of a house and do an analysis of it for this semester paper. I did one on the Gropius House, and Ise was very kind to loan me her oil bills for 40 years so I could compare the consumption of heating oil with the design of the building and how much heat. I knew how to study what the solar angles were, how much solar radiation came in, what the degree days are, which is a measure of how cold it is outside or how hot it is. So, that was an interesting project, and I decided the summer before, I actually, I transferred to Harvard. I spent that summer in between expanding that study. And the Casio handheld computer had come out - pocket calculator - which meant I didn't have to do all the hand calculations. So, I did a very detailed analysis of the climatic features of the house and the design of the house. I went and I talked with Casper Jenney, who was the contractor who built the house. The drawings that I had, that I got copies of from The Architect's Collaborative, Gropius's firm, they didn't show that there was insulation in the wall. And I confirmed when I met with him that while it wasn't in the architectural drawings, he actually put, they got omitted in the paper design but not in the real design. So, there was insulation, and that was important for me to do the calculations of how much heat was lost during the wintertime or came in during the summertime.

CB:

What was your impression of Casper Jenney?

NS:

Well, it's been a long time. I know he's out Route 2 a long way. [laughs] But I think he was apprehensive in the beginning working with Gropius. There was an unusual design. This is basically a platonic solid - a prism that has been either carved away to make the overhang, which we can talk about, or project it out to make the porch or extend it out to make... So, it was a design based on a kind of pure geometric shape, and it had a flat roof. And there are flat roofs in Boston, there might not be any around Lincoln where we are. The thing with flat roofs, they're different in terms of how the snow handles a sloping roof. The snow comes off, but you sometimes have to put little cleats to stop the flow of a large piece of snow which might hit a pedestrian down below. So, there were challenges of that. But a flat roof works perfectly fine, if you have a good membrane roof and you have it sloped inwards so that the drainage when it melts goes through the heated portion of the house, because you don't want the pipe to freeze up and stop up. So, he was okay with that. This was wood frame construction on foundations that are traditional. All of the building techniques were ones that he was very familiar with. So, I think they developed a good relationship. And, Gropius knew his skill as an architect. His father was an architect, and I'm sure he was in the design studio of his father at a very early age. And also, his great uncle was a famous architect, Martin Gropius, who designed the Leipzig Gewandhaus. So, he was kind of imbued... he grew up within architecture, and that probably made him a lot maturer than people that came into the field maybe in their adolescence or early twenties. But he knew his stuff and he knew how to design a building that would use the traditional materials that were available. Now, he would pick industrial windows for this house. These are not traditional domestic architecture windows, but they were available commercially and he used things that were made by industry.

CB:

The glass block.

NS:

The glass block, which is here, which is very interesting because the sun comes in on the south and it kind of indirectly illuminates the study, which is facing the north. And there was a big plant in between there. So, it kind of got north light and indirect sunlight from the south.

CB:

Now, you mentioned that Casper Jenney was initially kind of hesitant to get involved with building the house. Was that because it was just such an unfamiliar design in 1938, and/or was it because he didn't like the design?

NS:

No, I don't think he disliked the design...

CB:

...just unfamiliar.

NS:

Well, the first thing to say too is, I think that Gropius's command of English... Ise taught him English starting in England, they read novels together. So, there was a language barrier there as well. But they developed a relationship because he spoke very highly of Gropius, and Gropius would routinely visit the

construction site. And there's one part where we'll talk about "Small but Perfect Things" - part of designing a house is that as an architect who's a teacher, you can use it as an example with your students, and the house will go from early foundations up to finishing within the tenure of a student's time at a university. So, he would come out here regularly with his students and they would discuss - "This is where we're doing the foundations, and here's where the framing is going to go, and here's how the electrical is coming in, and here's where the HVAC is going to be". Heating, ventilating, air conditioning. There wasn't air conditioning at the time, so just heating and ventilating. So, I think they got along, and obviously you could see the house has held up very well, and I understand that Historic New England did have some water damage on the east face that they had to repair, take it apart and repair it and restore it back to its original condition. But other than that, I think the house has been pretty sturdy. Ise always talked about... there was a really intense hurricane in 1938, and this house stood up when everybody thought, "Oh, those windows would be blown out". And she always commented that she and Gropius liked to be able to watch snowstorms while eating strawberries in the house, that this dichotomy of fresh fruit and wintertime was something that they really enjoyed.

CB:

Now we'll talk more about the house but before we do that, I want to go back to Ise for a moment.

NS:

Yeah.

CB:

I'm curious what your impression of her as a person was. What was she like? What was her personality like?

NS:

Well, she was kind of very dramatic. I mean, in a theatrical... she was a tad aristocratic. She had a diction. She had learned English in boarding school, when her parents sent her to boarding school she was in her teens, and so she spoke very good English, and she had a German accent, and it was very dramatic in her presentation. She was always well dressed in Marimekko designs. She wore makeup all the time. She was kind of painted like a thespian in a way. And she had a good sense of humor. She was very connected with American culture. She would go regularly to The Architect's Collaborative for parties that they had, and she knew all the people there because Gropius had run a firm with his students when they graduated. And so, she had her ideas about the politics, and she was of this world. She wasn't living in the past or doing anything that kind of separated her from... she accepted America as her home and embraced the government and the principles that this country was built on.

CB:

I get the impression about her that she was a very social, very warm person, easy to talk to, easy to get along with. Was that your impression?

NS:

Oh, yeah. Yeah. Well, I think that's been one of her strengths all the way back to the Bauhaus. So, in the Bauhaus, Gropius was busy administering this institute, basically, and she was doing all the public relations work. She was meeting with the press, all the dignitaries that came through to see it, all the famous artists, musicians that visited the Bauhaus. She was the one that had to be the host to them.

And so, she was very outgoing and liked to do that kind of work, and not everybody can do that. So, she was well positioned in her role to do the things that are necessary for an institute like that to grow.

CB:

And would you say that that was one of her biggest contributions to the Bauhaus and to Gropius's work, was her spreading the word and her connections with people, and...?

NS:

Well, but it's also her skill as a writer and as an editor. So, she could have had a career of her own as a writer. She had done writing before she met Gropius. And there's actually a story that she told me that's recorded in this "Small but Perfect Things" project that I did - we can talk later about that - where she and Gropius decided whether she should have a career of her own or whether she should continue to be editing. And she had written an article - "Grandma was a Career Girl". This was after World War II and speculation where a lot of the women that worked in factories while the men were at war would go back to the house or would they continue working, and she thought they would continue working. So, "Grandma was a Career Girl". And of course, the Atlantic Monthly didn't like that, and they didn't want to publish it. And she decided that rather than try and compete with Gropius in having her own career, that they would put all their eggs in one basket, is the way she said it, and that she would continue to edit and arrange. So, like *Scope of Total Architecture*, which is a little thin book, it's dense, but it's put together by a lot of essays and lectures and stories that Gropius had used in different venues. But she put them together and made them into a coherent book. And she did that on multiple books. So, here's a book called *Apollo in the Democracy*. Here's a picture of Gropius. And she organized all of this and other books as well. So, I think her power as a writer was also a big strength to him.

CB:

Sounds like she was just very good at communication - good at words, good at connecting with people...

NS:

Oh yeah.

CB:

...on a verbal level, and with her writing, and maintaining correspondence. And also, preserving the legacy. Can you talk a little bit about that?

NS:

Yeah, so when I met her, she was busy translating her diaries. So, she had kept a day-by-day history of everything that happened in the Bauhaus. I want to say it's over a nine-year period. It's a very long period. And she was translating them, and she would sit in, right here at this position in a chair that Eero Saarinen designed.

CB:

The womb chair.

NS:

The womb chair, which is technically right now over there. But she'd spend her nights translating all this stuff. And so, she documented, and part of these press clippings that she was keeping was really to keep a record of all the society's reaction to the Bauhaus and all those notebooks with press clippings ended up in the Bauhaus Archive. I sent some of them to the Bauhaus Archive. Some had been sent before I got here. So, documentarian, keeping the records and being diligent in the historical perspective, because she knew what the significance of the Bauhaus was. And she talks about when she married Gropius, she knew she was marrying the whole school too, in the sense that it's not like they're separated. I mean, she would now become an integral part of the Bauhaus. It's not something that her husband did and then came home. She was in the middle of it.

CB:

And also, it's worth mentioning that she was quite creative in her own right with her own designs, not just the writing, but creating jewelry and designing clothing.

NS:

She created jewelry, and she was a photographer too. So, there was a lot of photography experimentation at the Bauhaus. And there's actually some photos in the Bauhaus book - it's called *Das Bauhaus* in the German version and MIT Press did an English version - and there are photographs that she has taken. She also commented that the first exhibit on the Bauhaus in the Museum of Modern Art was done only with the stuff that she and others had brought over in their suitcases, that they didn't have that much material. They had paintings by Paul Klee and Kandinsky and Feininger and Moholy-Nagy that they could pack in their suitcases, but no furniture or anything like that could they show in this first exhibit that Herbert Bayer had gotten the commission to do.

CB:

And did you ever meet their daughter, Ati?

NS:

I did meet Ati. She would come occasionally and on Saturdays when I came out, she would be staying over for the weekend. So, I got to know her a little bit, not a whole lot.

CB:

Where was she living at the time?

NS:

I think she lived somewhere in New York, not exactly sure, or the Cape. Maybe she switched back and forth.

CB:

Do you know what kind of work she was doing at that time?

NS:

Well, she was a graphic designer too, and she studied, I think, in a college in North Carolina where Anni Albers went, I believe. A lot of German emigres, they came and they ended up in different schools. Mies

van der Rohe ended up in, I think, the Illinois Institute of Technology and Albers, Joseph and Anni, ended up in Black Mountain College, was what it was called in North Carolina. So, Ati studied there, and I've seen some of her work. She's done book illustrations and graphic text kind of productions.

CB:

That's something I thought was interesting that you mentioned, was this idea that Ise lived in the present, that she was very modern, and that goes along with this idea, the philosophies of Gropius, and using modern materials and creating architecture and designs that are befitting of the modern time, not getting stuck on past outdated styles. So, it sounds like even as an older woman, when you met her in the '70s, she was still very much of the modern, current era.

NS:

Oh, yeah. Yeah. She had her Olivetti typewriter over there, and she would type away on letters to everyone. She maintained all the correspondence. When Gropius passed away, when people would mail him letters, she would answer them. And so, she really picked up, when he passed away, she stepped right into doing what he was doing. And it was clear to me working with her that, I've always felt that she wasn't sufficiently appreciated by people. I don't think they realized how integral she was to what Gropius did at the Bauhaus, and here. In addition to being a translator and an editor, she was his confidant.

And it was not easy being at Harvard. Gropius had been the founder of a school where he picked the faculty, and it was a small school, not large like Harvard. When he finally got to Harvard, I don't know if everybody knows the history, but Gropius was offered a job when he was working in England. They had gotten out of Hitler's Germany through Italy to England where he was working. And so, Harvard offered him a job to come to America, and he did take it. There's a whole story about that. And Harvard's a very big organization, and here he was head of the architecture department. So, he wanted to have a basic design class, which Harvard didn't want to do, and so that was a problem. So, he was always having to deal with a bigger institution, which had silos basically too. So, I mean, universities at that time, they've gotten more integrated, but there are groups of academics that don't really talk to each other. They're part of a large university, but it's many disciplines with a lot of white space in between. And that always appealed to me about white space because that's the way that you can combine things. You can basically take an idea from one silo, if you will, and another, and put it together and make something new. I think that was very much a Bauhaus kind of idea, that you could synthesize concepts borrowed from different areas into new realizations.

CB:

Did Ise ever share any personal stories about Gropius or the Bauhaus that really stuck with you?

NS:

Well, I mean, there's some that actually we recorded, and that's in the "Small but Perfect Things" tape project that I did. I do recall one story. Haile Selassie, I think was the king of Ethiopia, I may be wrong on this, but he had a very high position, and she just thought it was curious that he was riding a bicycle down the street in Oxford or Cambridge, I don't know where they were. But here was somebody that was like a king who was riding a bicycle like an everyday person. I thought that was interesting.

CB:

Well, we've mentioned "Small but Perfect Things" a few times...

NS:

Yeah, yeah.

CB:

So, let's just get into that now. I think it ties directly into your relationship with Ise. So, tell me about that project.

NS:

Yeah, okay. Well, so Ise being very verbal and clearly articulate, she wanted to record stories on a tape recorder. So, she asked me to go to the Harvard Coop and buy her one, so I brought her a little Sony. It was even before the Walkman. And by comparison now, it's like a shoebox. It's a primitive kind of thing, but it worked. And so, she would tell stories and record them on a cassette for people that wanted to have a recording with her. Or in the later years when she was in a bed right here, she'd ask the nurse to turn on the tape recorder and she'd tell a story about her life. And so, I had all those stories and I was listening to him. And when she passed away in '83, I lost my mentor. What have I learned in working with this woman for almost 10 years, who's such an impression? She's very impressionable on me, so I'm not the same person after I worked with her. And so, I thought, well, maybe I could do something with the tapes. Also, at this...

CB:

How many tapes were there?

NS:

Well, there were a bunch of little, there were probably... there was maybe 20, I dunno, over a dozen different cassettes with stories on them. And sometimes there'd be long gaps of no sound. So, I listened to all of them and so, I got a sense of what she wanted to have recorded on these tapes. And she made them obvious with the intention that they would be listened to, that they weren't just going to be set aside and never looked at.

And the other thing I wanted to say that, also about the time that she passed away, a little bit afterwards, Thomas Wolfe wrote a book called *From Bauhaus to Our House*, and he totally got Gropius wrong. The book's very entertaining and well read, but factually is incorrect. I mean, he painted Gropius as this Silver Prince, kind of coming down from Mount Olympus to heal all the heathens in America with *the* design aesthetic and everything that crude Americans needed. And it was in such a contrast to what I experienced. Now, the only thing I really know about Gropius is what I learned from working with Ise for 10 years and maybe some lectures and some books and a film here and there. But it's primarily Ise. And what comes across to me is a very wise person who had incredibly good social skills. He could smooth down disputes at the Bauhaus. He worked as a collaborator. He didn't want to be a star architect where everybody followed him and did designs like him. He started his company, I say it's not his company, their company, The Architect's Collaborative, with his students. It wasn't Walter Gropius Inc., it was The Architect's Collaborative. So, a very collaborative sort of person, reserved, always well dressed. I think he learned the importance as an architect of dressing well, and he always presented himself well. And he was, I think, moved more by reason than by emotion. And certainly, there were

probably a lot of students at the Bauhaus that were wildly emotional, and he always had to kind of calm them down too and make sure that the school ran.

So, he seemed to be one of these really rare people that, I mean... he wrote the philosophy, he did the curriculum, and he designed the building for the Bauhaus. And James Marston Fitch, who actually wrote a Forward for the work we're about to talk about, noted that the only other person he knew that had done that was Thomas Jefferson at the University of Virginia. And this is again, coming out of, I maintain, European Enlightenment thought - to have a concept of a university and to have a curriculum and a philosophy, a mission statement, and an actual physical building that it would be housed in.

CB:

So, you had all these tapes...

NS:

Yeah.

CB:

... and what was your primary objective? You wanted to preserve her legacy through those, and did you plan to make them available?

NS:

Well, I wanted to preserve the legacy, and I wanted to counter Thomas Wolfe because what I got from these tapes of their life in Germany and England and America was something totally different than what he had, and I thought was more accurate. So, I came upon this idea. At the time, there were two artists named David Byrne and Brian Eno who had produced a record, an album called *My Life in the Bush of Ghosts*. And what they did, they realized that there were recordings of people on the radio and on LPs that people were speaking. When people are passionate, they speak in melodic kinds of ways with a unique rhythmic cadence that you could tell they're sort of possessed by their thoughts. And they took those recordings and then set music around them and made a record. And I thought, gee, that's a very interesting idea. Now, they distorted the voices, they put different effects on them and everything. I didn't want to do that, but I thought, well, I could take her stories and find complimentary music that sort of fit with the storyline that she was talking about or compose new ones. I mean, I knew not that much about music. I played a clarinet and I had a teacher. And so, I started thinking, well, what music would go with these tapes' stories? And I would find one that looked interesting. We would, with my teacher, would transcribe it, and I was able with a four-track tape recorder to put her voice down on one track and then with the use of synthesizers, which were becoming affordable and available, and even computer sequencers that basically you could have a drum machine with all the musical synthesizers synchronized to it. So, you could make backing tracks, and then you could put a saxophone or clarinet solos on top of it. You could do a whole variety of things to create this environment around a story that she was telling. So, that's what I did. And it took me about a year and a half to do it. I had to learn some music theory.

I viewed it as my Bauhaus project. One of the things where I was kind of grieving and thinking about what did I learn from this person? I thought, well, one way is maybe to jump in and do a project like I was at the Bauhaus. I'm doing something with that frame of mind. And so, I figured I'll do it with the stories she's told and with music. And so, that's what preoccupied me for a year and a half. And the intent that I had was, I was going to make a charitable recording that could be sold as a way to raise

money for the house. And I knew that I had to get copyright clearances because some of the songs were copyrighted. Most of them were, even though I transcribed them and reproduced them, they're still, there's a copyright for them. So, I had hired an attorney in New York City who was familiar with doing that process and went down that road a little bit, but not fully because there's a lot of money involved in that. So, I made a prototype and I sent it to maybe a dozen people. I sent it to Ati, I sent it, and this is after the fact. Ise never, apart from recording her stories, this whole concept of a tape project like this, this is way after her. She wasn't in that discussion.

So, I put it together and I had maybe two cassettes. I've since narrowed it down to maybe half of the number of stories that I have in them. But each one of them has kind of a story, and I tried to make them flow into each other. So, I showed it to a lot of people, and Ati was not particularly positive about it. I don't think she liked hearing her mother's voice. She maintained that Ise would not have wanted her voice recorded in her later years when she had physical difficulty speaking. But she was nonetheless alert and intelligent and speaking in an interview format with Dr. Harding and I, very alertly. So, the fact that Ati didn't really want to go forward with it meant that Society for New England Antiquities, SPNEA - Preservation of New England Antiquities - the predecessor of Historic New England, which owns this house now, never really wanted to go forward with anything like that.

I had envisioned, well, gee, if we could raise money, we could make a guest center in the garage. But that's already happened now. So, I'm glad that that idea found its way. So, I have the tapes. I have them on my MIT Dropbox, and I make them available to anyone. While I can't sell them, because that would be infringing copyright, I give them to people, anybody that wants them. And the Historic New England people have the website, or the download link where anyone can download them if they want, and there's a transcript there as well as the recordings.

So, in addition to the stories that Ise told me, which are of a more personal character, there's also an interview that she did with the Canadian Broadcasting Company in Montreal. And I was aware of it because she asked me to take a copy of it to the audio/visual department at Harvard. So, most of the stuff that I sent to Harvard was to the Houghton Library of rare books. But when it was in acoustic recording, it went to a different group. So, I sent it to them and I listened to it so I had a copy of that. So, I put that in this "Small but Perfect Things" so it's basically an interview about her life with Gropius in the Bauhaus, what the Bauhaus was about, what life in America was about. So, it's a nice contrast, and she was very proud of that interview. She said it's one of the best that she had done, and I agree with her. I mean, it's a very well done... So, if you know nothing about the Bauhaus, listening to that tape will tell you a lot about it. And she conveys the enthusiasm that she had when she met Gropius and the whole life that they had together.

CB:

It's an interesting project because it's sort of a mix of oral histories, almost like an archival-type project, mixed with creating music, right? It's an art project, at the same time...

NS:

It's an art project too, yeah.

CB:

... which is actually, I would say, very much in the spirit of the Bauhaus, that interdisciplinary-type work.

NS:

You take what life gives you, and if life gives you something and you can seize the moment, basically life prepares... "Chance favors the prepared mind", was what Louis Pasteur said. So, if you have kind of prepared your mind for things that happen and you see opportunities that come to you and you take them, that's what life's about. I mean, you have to take what life gives you and make the best of it. So, I said, well, this is a perfect project for me to do, and I'm glad I did it. And I pull them out and I listen to them once every year or so, and I haven't lost interest in them. They're still standing there. They were recorded in analog form on a four-track tape recorder, but they were mixed down to digital. So, I've been very careful. The technologies, digital technologies, come and go, and if you don't keep forward restoring your digital information into the new format... So, these were on big digital tapes in the '80s, but then they went to a different format, and then they went to CDs, and then they went to MP4. So, I've been very careful in digitally archiving the documents to move them forward.

CB:

Which is actually kind of a Gropius philosophy - keeping up with modern materials, modern technology.

NS:

Well yeah, you have to. And if you don't, I mean, I have lots of files that I can't even open now because I did them so many years ago and unless you're willing to go back to Adobe Illustrator 001, [laughs] you're never going to be able to open it.

CB:

What does the term "small but perfect things" refer to?

NS:

Yeah, so she says that in the story. There's a couple of ways of looking at it. One is, I mentioned that Gropius, when he was in the Bauhaus, there were never more than 150 students. And then he gets to Harvard and there's thousands of students. So, to arrive at what he calls a "perfect thing" is something that's scalable, that can be done at a scale that is doable, and it's like a prototype in a way. So, Gropius was very successful in reintegrating the craftsmen who have the pre-industrial era into the industrial. So, rather than basically being disenfranchised and not being needed to make any products because they were mass produced, he set up an art school where basically fine arts and crafts were combined together to train students that were skilled in both and could be the designers of prototypes, which then could be manufactured by mass production. So, that idea of being able to reintegrate people into the mainstream was a very important idea. I know I'm getting out of sync with the "Small but Perfect Things" talk, but um... how do we get back on track? [laughs]

CB:

Well, let's actually go back to the Gropius House itself for a bit.

NS:

Yeah, okay.

CB:

Do you recall your first impressions when you first came here?

NS:

Well, my first impression was, yeah, I'd seen photographs of this house, it's well-documented, and I'm now not only in the house, but I'm in the house with a person who lived in it or who lives in it. So, it was a lived-in museum in a way. And that was the lifestyle that Ise had after Gropius passed away, was she would have 30, 40, a lot of people in here. And when I was working with her, she always would kind of hold her court down here in her Saarinen chair right over here, and I would be upstairs sort of being like the museum guard. I was walking around because people would touch things. They might even steal something. So, she always wanted somebody up there, but she knew how to live in this house as a person and then kind of become the celebrity that she was in the house and hold court and it becomes a museum. And people come from all over the world, as you know, to look at this house.

CB:

So, when she would have 30 or so people over here, where were they congregating? Because it's a pretty compact house. In the living room here where we're sitting, right? Or maybe in the screened-in porch?

NS:

Well, the screened-in porch, they would walk, well, it depends on the weather too. And they would walk around the house because it is very photogenic on the outside as well as on the inside. I should say that I cleaned all of these windows. I did interior, in addition to gardening. I vacuumed the floors. I know where the vacuum cleaner is underneath the landing in the stairwell, and I cleaned all these, every square inch of these windows in this building. So, it was a very conscious thing, like I'm cleaning the windows of the Gropius House. This is a very special kind of thing to do because this place kind of radiates. I mean, it attracts lots of people. It's very inspiring to a lot of architects who come visit this place. It's just really special. It's maybe not the first modern house in America - maybe Neutra in New Orleans, in Los Angeles, did it first. But this one hit the big time, in a way. And I think in the beginning, I think there's a comment in one of the papers I wrote on solar design, that they could have never gotten a mortgage for this house from a bank. And it was Mrs. James Storrow who basically loaned him the money and the site to build this house on.

CB:

What does it feel like for you to be in here right now? Does it bring back memories?

NS:

Oh, yeah. It brings lots of memories. I was just here two months ago for the Gropius birthday party that was a tent set up outside. But there's so much history that's gone on in here, and I've gotten to meet people that would come out to visit Ise. I met once Hans Wingler here. He was the Director of the Bauhaus Archive in Berlin. Howard Elkus, who was a famous architect at TAC, The Architect's Collaborative, would come out and visit. He started a company called Elkus Manfredi which is very prominent in Boston now. He would come out and visit. I met Ise's cousin who stayed here for a while. So, all these people were coming through. I came to some of the birthday parties that were for Ise. It's just, she's in contact with people all over the world. And so, to be part of this house and this environment and this history is just very, very rewarding.

CB:

You must get some memories sitting here looking over, for example, straight ahead to the dining room. Like, "Oh, I had tea or lunch with Ise right there."

NS:

Yeah, I would sit there and cut [press clippings]. It was a very lived-in house. So, there are some Breuer chairs, the tubular steel chairs. The seats are made out of caned wood. Caning. And the caning done in the Bauhaus a long time ago wears out. And she would say, "Well, Nevin, can you unscrew that caning seat and take it to a shop on Mass Avenue", which she knew, "and have it recaned?" So, I gladly did that. I know this is a historical piece of artifact, and when I told the SPNEA people that, they said, "Oh, well, you shouldn't have done that because that's an artifact". But this house was lived in by her and that chair... Yes, it was made in the Bauhaus archive, I'm sorry, in the Bauhaus workshops. But it needs to be repaired, so repair it. [laughs]

CB:

I know that Historic New England has put a lot of work into maintaining the look and the feel and the way that things are placed in the house to how it looked when she lived here, to be faithful to her interpretation of how it was supposed to look...

NS:

Yeah.

CB:

... because they had a unique experience of her being alive when it was bequeathed to them...

NS:

Yeah.

CB:

... so that they could learn about it while one of the original inhabitants was still around. What's your impression, being in here and looking around, as far as how it's been maintained, with the furniture and the artwork?

NS:

Well, I think...

CB:

Is it the way you remember it?

NS:

There may be minor changes. So, Ise was a very good horticulturist, so she had a plant that grew in the study behind that glass block wall that went 10 feet over. So, there's a different plant there now, but all the furniture is the same. The layout is the same. It's very little difference. I think they also had Ati who

lived in this house and her memory, so she was an advisor to SPNEA and HNE in how things should be arrayed. And so, there's been very little change.

CB:

So, let's talk about your essay, which is called "Analyzing the Gropius House as Energy Conscious Design".

NS:

Yeah.

CB:

You've alluded to it. We spoke about it a little bit.

NS:

Yeah.

CB:

Tell me again how that came to be and what your goal was.

NS:

Well, I mean, as I said, it was just a term paper, a project - analyze the house for its energy consumption and its passive design for a graduate course at MIT that I was taking. But it grew into something more. And as I spoke with Ise about what I was doing and she provided more information, she always recalled when this house was not even built at all, and they would come out, the three of them - Ati, Ise, and Grope - and walk around the house and to be, what's it going to be, envision what it's going to be. Gropius knew the latitude. He knew how the sun was going to move. He knew how much glass to have on the east side, on the west side, on the north side, the south side, how to design an overhang on the south side so that the summer sun, when it's high in the sky, shields the glass so that the heat doesn't come into the room. This was before air conditioning or any of that type of technology. There was oil heating and hydronic heating in the pipes, circulated water to heat the place, but not to cool it. And so, he knew how to make this house work as, what Corbusier would say, a "machine for living". That was part of the Modernist aesthetic. But it borrowed from traditional design too, and people knew how to do solar design and passive design before the Modernist movement. So, he was aware of that, and he did the design in a way that fit the requirements of his family that were living in it, but it also was climatically situated. So, the amount of glass on the north face and what that does and what the south does are things that he considered in the design of this.

I actually have a drawing here. This is the original artwork that I had prepared that was copied to make one of the graphs that was used in the paper that I eventually had published in the American Institute of Architects journal. I was still a student. I did the work mostly at MIT, but I had transferred to Harvard. So, I was a first- or second-year student in the graduate program, it was a three-and-a-half-year program at Harvard. And this paper came out and Ise was kind enough to let me take some quotes about designing the house and the climate considerations and all of that, and put that into the text of the story, which was mostly kind of a technical narrative about calculating how much heat flows through each facade at each day of the year, and figuring out what the energy consumption of this building was and how his design kind of minimized the amount of heat that was needed. So, one example is that this

west wall fireplace here, which is a big brick structure - the west sun is particularly bad, it's just as strong as the east sun, but because it comes when the air temperature is much hotter, means that if you have a lot of west sun coming in, you have an uncomfortable situation between the ambient air temperature and the solar radiation that's coming in. One way that it has been classically used to block heat on the west side is you have thermal mass, you have brick or mortar stone that basically absorbs the heat and it slowly moves through the thickness of the wall, but by the time it gets to the inside of the wall, it's midnight, it's later, and you don't have the heat coming at the same time. The ambient air temperature is high because the temperature cools down.

CB:

The Gropius House is clearly a very Modernist European-style design, but at the same time it's remarkable how much he was able to integrate traditional New England building techniques as well. Can you talk a bit about how those traditional elements affect the climate?

NS:

Well, I mean it's a wood frame house and he used wood clapboard in parts of the house, but he would use it differently than what was used in a traditional New England home. He used casement windows. It was interesting that SPNEA, when they renovated the building, did not change the case. They're single pane windows. They're large windows, which were the only ones available at the time, in '38/'37 when this house was being built. They decided not to put in double pane because that wouldn't have been true to the house as a historical record. So, I understand that they took out the casements and had them shipped to a factory where they refurbished them. Basically, they cleaned the frames and resealed the setting of the glass in the steel frame, the original frame, and brought it back and then re-engineered it and put it in. And I understand there's now cooling in the house, and Ise always maintained that she didn't need any cooling, but that was in a time when there wasn't global warming. And the difference between, everybody I think knows, between climate and weather is that the weather can change very quickly in the course of a day, in an hour. But climate is something that's averaged over a long period of time. But on average, we are getting warmer. And it also means that there are more extremes of intense heat and intense cold.

So, the need for... in biology, it's called homeostasis; it's a way of controlling extremes. So, insulin helps you control how much sugar is in your blood and you operate between... if you have too much or too little, you're in bad shape, but you've got to be in the middle. Well, the homeostasis of a building inside, the temperature has to be within the comfort zone, and that's a complex combination of solar radiation, airflow, the clothing that you're wearing, and the humidity. So, all those things have to fit together. If you exceed them, you're going to be out of the comfort zone and then you'll have to supply either heating or cooling or dehumidification in order to bring it back in. So, this house, now that it's a museum and can have 10, 20, maybe it's sometimes as many as 30 people - every person is like a hundred-watt bulb and produces that amount of heat and also produces a lot of humidity. So, maybe the heat and humidity are good in the winter, but not so good in the summer when you're coming here and a lot of people visit here in the summer months when the windows are open. And so, there are uncomfortable conditions, and that's why I think HNE, Historic New England, made the smart decision to install air conditioning. I saw the compressor was out, actually, over to the left of the parking when I pulled up here. So, it's interesting to have air conditioning in this building, because there was never any before when Ise lived here.

CB:

And you mentioned the big windows that we have here in the living room, which really make for a wonderful view, a lot of openness and light. The challenge being that they're single-pane glass, or at least they were back then, right? So, you're going to get cool air coming through, but then mitigated by some of the passive solar heat.

NS:

Yeah, well, sometimes you get the heat that you don't want. So, the other thing that we didn't mention, I didn't mention, on the west side is that there's an exterior aluminum blind system, which is outside the windowpane. So, Ise would close that in the afternoon so that the sun basically would hit the Venetian blind that was closed on the outside, not on the inside. So, it kind of kept the heat, it reflected the solar radiation out to minimize the west sun. But on the east sun, you want that in the morning, that warms up the house, you wake up to the sun. So, very skilled in the use of light too.

CB:

And a notable contrast to the big glass panes down here is on the second floor - the ribbon windows that go around the front of the house. How do those affect the climatic conditions?

NS:

They give light, so it's north light on that side of the house. The living quarters upstairs are on the south face and Ati's room upstairs is shaded in part by the south overhang, which is kind of carved out of the building. It's like he had a prism and he cut part of it back but kept the roof line so that the roof is still an overhang, but the windows are set back, which is a technique to basically give the angles that are needed to reflect the movement of the sun.

CB:

And I know that Gropius was very conscious also about his design of the landscape around the house, like for example, moving those two mature trees in the backyard that are now huge. But he had placed those over there from a different part of the property.

NS:

Yeah.

CB:

Were there climatic decisions being made within the landscape?

NS:

So, this tree, which is 20 feet out from the south window, as I recall, is a deciduous tree. So, it loses its leaves in the wintertime which allows the sun to come in. You want the sun to come in in the winter because it's giving you passive solar gain, which is what you want. I mean, every British Thermal Unit, BTU, of heat that you can get from the sun is one that you don't have to pay running an oil burner down in the basement, which only works at 70% efficiency. So, you don't even get all the energy out of the oil, you only get a fraction of it. And we're aware of carbon dioxide in the atmosphere, it's going straight up to carbon dioxide too. That wasn't an issue in the '30s when he designed it.

CB:

How about the flat roof? Is there any climatic element to that?

NS:

Well, so when snow falls down, it actually acts somewhat like an insulator. The wind that's blowing it creates an air pocket so that if it's compacted snow and is frozen down, that's a different story. But if it's fluffy snow, rabbits can actually hide in snow, freshly fallen snow, because it insulates them basically from the wind. So, having a flat roof is not a technical problem. You have a good, well-designed contiguous membrane that has no openings in it, and it's sloped to the middle of the house so that when the temperature rises and the snow goes to ice or liquid, when it's liquid it can flow down through the heated house, so it's not going to freeze in the pipe. So, a flat roof is no problem. I think that the flat roof is part of this interest in platonic solids. Plato had a classification of something like six different types of solids. And the prism, the cube, was one of them, and the tetrahedron - a four-sided object - and there's a very nice kite that is up in the corner right here in the house that was built by one of Gropius's students that's built as a tetrahedral. A tetrahedron is, if you imagine three equilateral triangles or four equilateral triangles, and you glue them together into one structure and then stack them, start building bigger ones on top of them, it's what's called a fractal structure. The structure is the same at any scale as it goes down. It's like a babushka or a matryoshka doll, there's another doll inside another. It just gets down and down, smaller and smaller. But the platonic tetrahedron is really the fundamental unit of structure. If you analyze the solid, when you put a load on it, the forces are actually going down and distributed in a tetrahedral kind of structure. So not only is it a kite, you can fly it, but it's symbolic of form. And Bauhaus liked using platonic shapes: triangles, circles, spheres, and primary colors. They were looking for the essential elements of design.

And one aspect that we haven't really talked about, I think, is that Gropius was really not after a style, he was after a design methodology that was supra-personal. It was not a personal approach. It was more of a universal approach, that whether you were designing a door handle or a building or a city, there were principles that you could use to organize and evaluate the information, take what the client wants in terms of square footages or adjacencies, you know - this use has to be next to this use - take all this information and have a methodology that you can use to assemble it before you start designing and think about what are the requirements of this building to be. And then start coming up with schematics, kind of primitive arrangements that allow you to arrive at each stage along the way of this process to ultimately get to an optimal design that the client thinks meets their purposes. The architect thinks that it holds together aesthetically in terms of its use of materials and arrangement of spaces and ultimately will fit in the culture that this building is to be built in, and along with its climatic aspects. So, the International style - first of all, style is something... whenever I had a discussion with Ise about that, she would say, "Well, a style is something that comes after the fact". If you're out to design a style, you're never going to get anywhere. A style is something that people categorize what you've done after you're gone. It's not something that's forward-looking, it's retrospective. And that I thought was a very important thing.

Also, I think you've touched on a point about Gropius' attitude towards the past. Well, I think the past has a lot of meanings. One element of the past is the use of ornament and classical facades to apply to a building to kind of beautify the building, which was the tradition. If you hired an architect in the pre-Modernist era, and it was, let's say you were designing a bank, well, you wanted ionic columns on the front to look like it was a Greek temple almost, that it was a bank that exuded permanence, that your money was going to be safe here because this facade was meant to evoke that in somebody that walked into the building. It had nothing to do with the bank in terms of how it was designed or laid out. It was

just a facade. And this was part of the training of the Beaux-Arts Academy in Paris where if the client came in and said, "I want to do a hotel and I want an Egyptian-style hotel", then you whip out your drawings that you have stored of Egyptian architecture and you figure out how to use them on this building that has nothing to do with Egyptian architecture. It's just a superficial skin. And so, he didn't particularly like that. And the Modernist Adolf Loos, was a Viennese architect, he wrote a book called *Ornament and Crime*. It sounds like ornament was a crime, but he was just saying that the best designs, the argument was that the best designs would be ones that had no superficial decoration on them. Now, that's not an absolutely pure thing about Modernism. I mean, Mies van der Rohe, he might be using a mullion, an angular piece of steel, in a design but it's because of the scale that he's working with and his aesthetic of it. So, I mean, it's not to say there isn't ornamentation. I mean, you look around here and the use of glass block, the artwork that's here, it's only natural to have some ornaments. But this methodological use of facades that are borrowed from history, that didn't seem to fit what was needed in the modern post-industrial era.

CB:

It's often talked about, in regards to the Bauhaus and Gropius's building style and philosophy, that functionality was a key focus, right? That, to your point, getting away from this decoration that doesn't serve any practical purpose in order to... the form would follow the function.

NS:

Yeah.

CB:

There was something interesting in "Small but Perfect Things" that Ise said, which is that, she brought that up and said, "One of the misconceptions is that it's purely about the physical functionality", and she wanted to highlight the *psychological* functionality. How does it make you *feel*, right?

NS:

Yeah, yeah. Function is a very broad term. It can mean a lot of things. In biology, it's very clear what it means. In architecture, it's a little more diffuse. Function can mean that the building is built solely for the intended purpose. So, if you're doing an auditorium, it's more or less kind of a pie-shaped structure with a stage in the front and it expands out, and you could maybe show that the function of the building is an auditorium inside by having a shape on the outside. So, the function of the exterior is to kind of connote what's inside it, so that's one use of function. It's also used kind of in a pejorative way, that it reflects a purely utilitarian role of architecture, which is not true. I mean, you can graduate... if you imagine a structure that is highly symbolic, but low function, low utilitarian, it might be a sculpture commemorating the passing of a famous person, a tombstone. And at the other end of the spectrum where you have very low amount of symbolism but high amount of utilitarian, it might be a nuclear power plant or an operating suite, something where the function in very precise terms is really dominating. It doesn't have a symbolic meaning the way something like a sculpture to memorialize a past person would be.

Gropius was always very concerned about the social value of architecture. I mean, he had witnessed the horrors of World War I. Cities had been destroyed. Housing had to be rebuilt from basically the ground up and that you had to make the architecture not as a jewel-like kind of structure where buildings talk to other buildings and there's no human involved. There are humans that buildings should talk to, and they talk to them by reinforcing psychological aspects of how that makes you feel to be in a space. I mean,

basically, architects are designing space, which is sort of the inverse of what the physical realm is - it's what's in between. So, in this house, it's the continuity between the inside and the outside. I mean, with this glass south facade, you feel that you're connected with the outside, and when you're outside, you feel you're connected with the inside. There's a warmth that you get by being in a space, and that is a very important aspect. This fireplace - yeah, it provides warmth, but it also provides a psychological feeling of wellbeing and comfort. So, you're trying to appeal to the human sense of security and privacy, and security in an environment.

CB:

In the '70s, when you were connected to Ise, were you aware when she decided to bequeath the house to Historic New England, to SPNEA, at the time? Did she ever talk about that with you?

NS:

Oh, yeah. I was aware and she spoke about it, and at one point in this transition, she was considering that my wife and I might want to live here for a period of time. And so, she took Barbara, my wife, and I out to lunch, and we had a conversation. And we wanted to have children and once that came out, there's no way that you could raise a child, live in this house and it be a museum. That was just not a possibility to do.

CB:

Do you think she made the right choice by having it turned into a museum?

NS:

I definitely think she made the right choice, and I know that her daughter, Ati, who could have inherited the building, what Ise did is that she gave Ati some Paul Klee paintings, which were actually more valuable on the market than the house was. So, I think she looked out for her daughter's wellbeing but giving the house to a society which would maintain it and make a museum out of it and make it open to the public as a cultural thing is so precious. I mean, this is a very special building that, I don't know the thousands of people that come here, but I know it's large and people want to come to this house. I remember this house became a postage stamp at one time. Fallingwater was one of the others, and I'm forgetting, it might've been a Neutra building, I'm not sure. But that little U.S. postage stamp which had the Gropius house coming up the drive, basically that perspective, I always thought, "Well, wow, this a postage stamp". [laughs]

CB:

Okay, so let's go back to your career a little bit.

NS:

Yeah.

CB:

I know that you actually, we've been talking about your work in science and art and architecture, but you actually worked in real estate as well.

NS:

I did. I did. Yeah. Well, so Ise and I spoke about that. She pointed out to me that I.M. Pei, a very well-known student of Gropius, decided in the early part of his career to work with [William] Zeckendorf, who was a developer, and I think a lot of his fellow architects thought that he was going down the wrong path, that he was prostituting himself to the commercial interest of developers who were making buildings for profit. And she disagreed with that, as did I.M. Pei. You know, I.M. Pei learned how to pour architectural concrete. He perfected that while he was working as an architect for Zeckendorf on commercial developments. So, she was able to see that you could take different paths.

So, I was interested in real estate development as well. In fact, I started consulting when I was still a student at Harvard on energy matters of new buildings that were being built by a developer called the Beacon Companies. One of my professors at MIT, who also taught at Harvard, was a consultant to them on One Post Office Square. And I would work with Jim Becker, was his name, on energy calculations on this new building. And when I graduated from Harvard, Jim hired me as a development manager on a project in Washington at 1615 L Street, which was still in the land assembly stages. So, it took a few years to get zoning clearances and close alleys and meet abutter needs in order to have a developable parcel where we could build this building. And so, I worked on that, and then I started doing new business development. The fact that I was an architect, and by the way, I was doing my apprenticeship to get my license as an architect while I was working with the developer on these projects. So, I managed architects. I wasn't at the drafting board anymore, but I was working with the engineers and the architects on the design of this project. And we had a team here in Boston and a team in Washington that was working on it.

So, I did also new business development and desktop publishing had come out about that time in the mid-80s, so instead of typing out graphics that would be used in a brochure, you could use desktop publishing in nice fonts that made it a very artistic kind of product. Somebody needed to do that, who understood what proformas were because it would be financial calculations, what the elevations, and the plans, and the aerial photographs and all of that were in the book. I was able to do that because I was trained as an architect, so I ran a desktop publishing and graphics operation for the Beacon Companies on a lot of proposals that they were doing.

CB:

And I know that you, after this real estate period, ended up in biotechnology.

NS:

Yeah.

CB:

I'm interested to hear how...

NS:

Yeah.

CB:

...these worlds, your architectural background and the world of biotech....

NS:

Yeah, yeah. There was a recession in the early '90s, and Boston had gone through a boom in the real estate market. For residential alone, there was a growth rate of 3% per month. I mean, this is unsustainable, and it popped. And so, suddenly this building boom just came to a sudden stop. And I could have moved to another city and done kind of a similar thing, but I decided I'd been out of the field of molecular biology for 15 years. At the time I left, there was no biotechnology. I mean, some of it was going on down the hallway at Stanford with Paul Berg, who later got a Nobel Prize. So, some of the genetic engineering was happening when I was still at Stanford. I wasn't really part of it. So, when the biotech industry came up and the first company was Genentech in South San Francisco, and then there was one, Biogen, and Genzyme here. This area became a cluster for biotech firms. So, as I was looking, what industry do I think is growing when the recession, the real estate boom, is off? It was biotechnology. So, I figured this is the area for me to go in. I have a technical training that was very deep in the molecular biology that gives rise to the biotechnology industry. And with some hard work and reading in the library and meeting professors and asking if I could sit in on their lectures, I brought myself up to what the current knowledge was of biotechnology by my own self-training and attending these talks. And I also figured, since I had run a company, because I had a graphic design company and I hired employees and I had kind of a street-level knowledge of running a business, but I had no financial theory, I had no management theory, I figured I needed to go back to school.

And there was a management of technology program, a 12-month program where only engineers and scientists could apply for it at MIT Sloan School of Management. It was a joint program between the management school and the school of engineering. And for that reason, I had to do a thesis, which was a requirement in the engineering school. So, I picked gene therapy as a, I wanted to do it a topic that was part of biotechnology that was, what you call, is on the upward swing of the hockey stick, something that's going very slowly and it's about to really take off. And gene therapy is at the time a new type of therapy where you could add genetic material to a cell. There are a lot of genetic diseases where you have a defective protein and it's encoded in a gene that is not functioning properly. And particularly, you have two copies of every gene, one from your mother and one from your father. In recessive disorders, if you have at least one functioning copy, you're okay. You become a carrier. So, two patients that have one good cystic fibrosis gene, which is a chloride transport gene - it codes a protein that regulates the passage of chloride in and out of the cell - if you have one good copy and one bad copy, each of you, you're individually fine, but there's a 25% chance that one of your offspring is going to get two bad copies, and then they're going to have cystic fibrosis. So, you need to supplement those two defective genes with a good gene. And one way to do that is to manufacture a synthetic copy of that gene and put it in some sort of vector, a device, which could be an inactivated virus, or it could be what's called a lipid nanoparticle. It's a way to get that gene, that piece of DNA, into the cell where it can have a beneficial effect. And that was gene therapy.

And this thing was just taking off at the time that I was doing my thesis. So, this was a perfect opportunity to study a nascent emerging technology. And I was looking for a job too. I mean, the other thing to mention here is, I wasn't abstractly studying biotechnology for the sake of it. I needed to find a new career and a new position, so this gave me an opportunity to interview lots of startup companies that were doing gene therapy. So, in the month between the semesters in January, I started on the West Coast in Washington state, and I moved down through San Francisco, down to L.A., down to San Diego, and I interviewed all of these companies that were doing this gene therapy work.

And also, because when you put DNA into a human, there's a Recombinant Advisory Committee that's part of the NIH in Bethesda, Maryland that all protocols have to be publicly reviewed. So, it's open to the

public. Now, there's a discussion with the Federal Drug Administration, FDA, in parallel at the same time. But the fact that this public forum was a requirement gave me as a student an opportunity to look at the process of approval. So, it's not only the technical part of it - a lot of these diseases are childhood pediatric diseases, and the parents have to give informed consent. They have to be consented about what the risks are in being involved at a clinical trial. So, that took up a lot of the review of these gene therapy protocols. Some of them were done by academics and some of them were done by companies. But if you were putting DNA in a human, you had to go before this panel. So, it was a great opportunity to learn what ethical issues and what technical issues and what financial issues are involved in creating a new therapeutic like a gene.

And while I was writing my thesis, it was primarily commercialization of gene therapy, I had an *aha* moment in the library realizing that the design of a genetic therapy is very much like the design of a building. I mean the programming that we were speaking about and arriving in an optimum solution and being able to design it, test it in animal models, rebuild it, retest it, all of that. The process that an architect uses to do a building is very similar to what a scientist and a medical doctor use and biotech uses to develop a therapeutic. So, this was before the term "synthetic biology" actually came out, but it came out a couple years later, so it was a natural jump into synthetic biology for me. Now, synthetic biology is using advanced genetic engineering like gene therapy. Normally gene therapy was one gene at a time because that's where the technology was. Synthetic biology was thinking about genetic circuits. So, if you think about an electrical circuit, it's made of different transistors and resistors and parts, and they all work as a system together. Well, in synthetic biology, you take a number of genes that interact. Some of the genes are feedback inhibitors, so if something gets too expressed, it feeds itself back. It's like a built-in break. So, this genetic circuit, which acts like an electrical circuit... in fact, all of the original synthetic biologists were trained as computer scientists and electrical engineers because they were thinking, "Well, I want to build computation into a cell. I want to build an *AND gate*." If A and B exist, then turn on C. And that's something that is very easy to do with the transistors in a computer. Very hard to do.

So, my boss at the MIT Synthetic Biology Center was a computer science and artificial intelligence PhD - the first one to get a PhD in synthetic biology. And he wanted to build one of these *AND gates* in bacteria, and it took him eight years to do, but he did it, and you could do it. Now, it's not as fast as a computer that you have on your desktop, but it performed that computation, and that was proof that you could design a system and introduce it into a cell and it would behave as predicted. Now, not all biology is well understood, so things would not work sometimes and work other times; there was trial and error in getting it to work. But it's advanced to a pretty sophisticated state right now.

And what's going on in the lab today is what's called *neuromorphic computing*. It's basically taking the way that... well, 30 years ago, the brain was a model for how computer scientists could invent circuits so they could make computation behave kind of like the brain does, in that it has connections, multiple cells in nodes that have connections to other cells through axons and dendrites. So, it took that architecture, the use of that word is deliberate, and imported it into silicon to make computation. But now, can you take that same architecture that was inspired by biology of the brain and move it with DNA into an individual cell? So, every cell has got an onboard computation device. And why would you want to do this? Well, you might want to be able to sense if that cell gets infected. So, you would have parameters that if it got infected by a virus, it would sense the presence of the virus and would turn on a signal that could be read from the outside. It might send a light or it might release something into the urine that you could evaluate, so it could be used for diagnostics. So, neuromorphic computing is kind of like the leading age of synthetic biology.

I'm an alum of MIT. I wanted to get back in the lab and get on the bench and actually do experiments because I hadn't done experiments in 40 years. So, the professor that I work with said, "Well, I'm training some students right now, why don't you join them?" So, I got working into the lab and also learned how to do computation. That's always a very important thing to do, is you model all of these genetic networks in computers first, and it doesn't always say how they're going to work, but it gives you an idea. So, I learned how to do computer programming as a part of this training, and I mentioned to the person that I was working with that I've got business development skills. I could help go out and raise money for sponsored research at MIT. So, for two years, I worked on a pro bono basis. I had no income coming from the lab, but I was continuing to network my connections in the biotech community. And I was able to secure interest by one large pharmaceutical company in town, a desire to want to do a project with MIT in synthetic biology. And we went through a long process of talking with their different disease groups - they have a diabetes, a metabolic disease, an infection, a cancer. And what we landed on was, can we improve biomanufacturing, the ability to make these monoclonal antibodies in cells that are grown in culture, in big hundred-liter vats, basically. And that involves being able to do genomic engineering.

And so, I was successful. I landed three large projects. And I didn't just want to raise the money. I wanted to be part of the project, I wanted to be a manager of it, just like managing a construction process. You're managing a research process. Same sort of skills. And I wanted to be a contributor on it. So, I ended up being a co-inventor on one of the patents and an author on two of the papers. And I also worked with the technology licensing office to close the deal in the beginning. The reason these pharmaceutical companies want to be part of this process is, well, number one, they want to have access to the technology that's invented, so they get options on any technology that was developed with their funding that they provided. And number two, they're always looking for trainees. They're looking for people. So, the people that come out of postdoc positions in universities are ideal candidates for these companies to hire. And Kendall Square area next to MIT is one of the world's centers for pharmaceutical biotechnology development. And in part because it's adjacent to MIT, and Harvard's just down the road.

So, I've enjoyed my time as an architect within a group of synthetic biologists because they're doing the same sort of thing. It's a process of problem solving. And I think architects traditionally have not veered out of the well-worn path. I mean, attorneys I think are very astute that they can go and they can start up companies and they can move into society in much more different roles than what architects can do. There were three architects from the MIT architecture department that actually did come at the lab and they worked, and they were at the bench doing molecular biology experiments.

CB:

So, it's interesting, the stuff that you're talking about here, because on the surface, biotechnology and synthetic biology seems totally removed from the Bauhaus and from architecture. But, in reality, there's an interesting parallel because the Bauhaus used to say that "we design everything from a teacup to a building", to a neighborhood even, to a development. So, it's that "micro to the macro".

NS:

Yeah.

CB:

And the work you're talking about is actually going from the teacup to the *microscopic* level, to DNA even, and doing architectural work and design work within THAT space.

NS:

Yeah, this is moving down the scale of dimensions from kilometers of a region down through a teacup or a teaspoon. But you can go all the way down to the nanometer scale, which is a billionth of a meter, and a meter is about a little longer than a yard. So, there's a famous scientist named Richard Feynman. He was an MIT grad professor at Caltech, Nobel Laureate, who made the comment that, "There's plenty of room at the bottom", meaning the nano scale - the things that are down almost at the molecular level. And that's where biology has excelled because biology makes, through the process of evolution, and that's a whole other discussion, novel inventions basically that are selected by Darwinian selection, or they provide an advantage to the organism that has a protein that can do something that another form of the protein can't do. So, there's design that goes on down at the bottom.

Now, it's often said that evolution's kind of a blind watchmaker. There are random processes that go on. What distinguishes an inanimate non-living object from a living one is that a living one can reproduce itself, but it reproduces itself not perfectly. If it did just exactly one copy of itself, it would never have the opportunity to evolve and do anything different. And if the environment changed, it would knock out both the parent and the offspring. So, you have to have reproduction that is slightly imperfect, which allows variation. And then when the environment changes, if there's any variant that has a selective reproductive advantage, it's the one that carries forward. So, the evolution is not engineered the way we think of it. In fact, people joke in the lab that nature didn't really evolve for the intent that we would understand it. We have to work at understanding nature, and it doesn't do it in an engineering way, the way a human would do it, but we have to understand it, and then we have to emulate it and work at the scale that it has worked so successfully at.

So, the design of new functionality in a molecular biological system is something... some of it is random library sorting where you create variation and then you sort for the ones that do the desired property, or you use computation to predict which variations are going to be successful. That's a way to short circuit the bulk kind of brute force of just creating billions of different variations and then picking the few that work. But design is something that can be done at any scale, and I think that's maybe... the Bauhaus, none of this technology was in existence, and none of this knowledge, we didn't even know what DNA was. We knew that it was the heritable material from experiments that had [been] done before that. Then a hundred years before that, Gregor Mendel knew about genetics and discreet segregation properties into offspring. So, that didn't get put together with the molecular biology until a hundred years later. But we put all this knowledge together now, so we have a pretty good understanding of how the operating system of life works, and that's really the way to move forward with therapeutics and diagnostics.

Now, just to say, it's got a dual use. I mean, it has, like any technology, it can be used for good or for bad. So, Nobel invented explosives, and I think in part he created the Nobel Prizes because his invention was used for wars, not only just for construction or for building roads through mountains and that sort of thing. So, there's an ethical aspect of design of living systems and that we're really talking about architecting life in a post-genomic era where you have the tools and we have the parts. What do we want to do with this and how does it serve society? What safeguards are there? There's always a risk if you release a genetically engineered organism into the environment, that it could have a selective advantage and take over the wild population. That's an important risk that has to be evaluated in

agriculture. But there are clinical trials and the equivalent of clinical trials in humans with therapeutic drugs.

There's a similar sort of thing in agriculture, and people have invented ways to improve crop production by getting the ability to fix nitrogen, which is an important nutrient, is nitrate, into plants that don't have the ability to do that. So, wheat and rice don't have bacteria on their root systems that can fix gaseous nitrogen into nitrate, which they need as fertilizer. So, we make ammonia and inject it into the ground, and a lot of it is just run off into the rivers and causes pollution. Also, making ammonia with electricity is very expensive. So, if you can engineer an organism that can grow on the roots of these rice and wheat plants that produces that nitrogen, you can reduce the amount of fertilizer you need. That's a part of synthetic biology. So, can we engineer organisms that help our food production?

And if you look at climate change, we're going to need crops that can grow in warmer climates. Landscape architects, right now, take all the plants that grow in the Mid-Atlantic states and plant them up here because we know that Massachusetts is getting warmer and warmer, and the plants that grew down in a more southern latitude are going to be the ones that are going to survive up here. But there's going to be changes in the salt level, the ocean level. We're going to need plants that can grow in salt-rich climates with the lowlands. A lot of our economic activity is at the coastal level. Any agricultural operation at the coastal level is going to have to deal with different conditions of what we've got right now in terms of salt and climate, temperature, humidity, and all of that. So, synthetic biology is a broad approach to address environmental problems, agricultural problems, biomedical, which is what I've largely focused on, but it's just anywhere there's life, there is something that we can do with synthetic biology.

CB:

So, let's close it off with some thoughts about Gropius's legacy.

NS:

Yeah.

CB:

In your opinion, what is Gropius's most *enduring* legacy?

NS:

Well, I think you have to say the Bauhaus curriculum. I mean, this is something that has survived over a hundred years. The 100th anniversary was [2019]. The Bauhaus educational pedagogical program is spread over the world. It's in all of the different languages. It's really a masterpiece of creativity. I mean, it is borrowing ideas from the Enlightenment and bringing them into the modern era.

CB:

And speaking of the modern era, if Gropius were alive today, what challenges do you think he would most want to tackle with his philosophy?

NS:

Oh yeah. Well, let me think. Well, I think the first thing is that he would work to preserve our democracy. That's absolutely... And his book here is *Apollo and the Democracy*. Without a democracy, you don't really, you're not going to advance as a culture. The second thing is he would, realizing our

dependence on fossil fuels, would help any way he could in the minimization of use of fossil fuels and the increase in renewable energy. And that can be solar photovoltaic. It could also be fusion nuclear too. And the third thing that he would do, I think, would be to promote what's called the *circular economy*. The fact is, we create incredible amounts of waste, humans do, and in nature there's no waste. Whatever is kind of like an output product of one organism becomes the input of another. You only have to lift up a rotting log and look underneath it, which I did as a kid, and see all the stuff that's living off that rotting log. So, the ability to recycle, to build new things with the intent that they will have a finite lifetime, and they ultimately will be recycled back and put into other products. So, that's plastics, that's concrete, that's all the materials that go into building our built environment. We need to think about how to best recycle them so that we don't have just mounds and mounds of unused material that never gets... So, the circular economy is this idea of a system-wide thinking about use of materials, recycling of them, putting them in new products and reusing them. Plastics, we're building all this plastic waste in the world, which is permeating everything. It's in our bodies. Can we make plastics in a smarter way so that they are reusable? And that gets down into the ultimate chemistry of the plastics and how to break them down in one circumstance and put them back together in another.

So, I think those are the three things that he would be working on. And I had discussions with Ise about waste. One of the stories that I took out of "Small but Perfect Things" was this affluent society that John Galbraith promoted. As Ise understood it, this was production and production and consumption and consumption without any concern for the amount of waste. And she saw that all the waste that she was generating in her kitchen, where's it going? And she said, "Oh, well, there's no problem, we'll shoot it up into space". There was no thought about how to recycle this kind of waste. So, it bothered her a lot. We had a lot of conversations about that.

CB:

Well, speaking of Ise, I'm wondering, in what ways did your time with her influence your life today the most?

NS:

That's a big question. [laughs] I mean, she was my mentor, so I learned so much about her life and her perspective on things. So, I'm forever grateful for having known her, and I hope that some of what I've learned in talking with her shows up in the paper I wrote on energy-conscious design of this house and in the "Small but Perfect Things" oral history that I did with her. So, I certainly have learned a lot. She's the most amazing person that I ever met and was in tune and had a worldview that was critical at the same time, but also very positive. I mean, she was an optimist. And she had one story that she did tell me, and you might've read this too, is that when Gropius wanted to marry her... Gropius had been married to Alma Mahler before, and he met Ise years later, and she said, "Well, what if I disappoint you?" And his comment was, "I've become immune to disappointment because I've learned to think of things not as they are, but as they might become". And so, it was uplifting for her and helped her because she was marrying into a whole school, not just a husband, and she knew that. And she always cited *The Iliad*, which was the Greeks coming together for a certain journey, this teamwork concept, she knew she was becoming part of a team. And Gropius firmly believed in teamwork and collaboration, that the problems that an architect, modern architect, finds - they require multiple people. It's not something one person could do. You have to work as a group, you have to collaborate. You have to work with people that know things that you don't know and come together with a synthesis. And I think Ise definitely presented that attitude in her dealings with people and how she was as a person.

CB:

Preserving Gropius's legacy was so important to Ise, and she put so much time and effort into doing that over the years, from her time at the Bauhaus all the way up until she passed away. And it's interesting how *you* were influenced by her, through your connection with her, and you ended up doing the same through the "Small but Perfect Things" project, or through your article, keeping this memory and knowledge of the Gropius House alive, finding new ways to explore it and share it with people. I think that's an interesting connection and an important one that you had with her.

NS:

Yeah.

CB:

So, in closing, I would ask, is there anything that I didn't ask you that I should have?

NS:

Well, I do want to read a short, like three sentences that I found that Ise wrote. It was down in the bottom of one of these file cabinets in the basement when I was cleaning out all these photographs. By the way, I didn't mention that she had me clear out... she had two large file cabinets downstairs that were filled with architectural photographs going back to 1910 and lectures that he had done, writings, books, and all of that. And she wanted to distribute it to three places: to the Houghton Library, rare book library, and also to the Bauhaus Archive, and the Berlin Museum where there's a room, actually, a Gropius room that commemorates not only Gropius, but also his father who was Walter Adolph Gropius and his great-uncle Martin Gropius, so I did all of that as well. So, there's one short piece that I found that I wanted to read that I think is meaningful.

She says: "The sublime through knowledge, gradually dissected, cannot easily be reunited before our mind's eye. And thus, we are step-by-step deprived of the greatest gift bestowed upon us, which is the unity which lifts our consciousness into a full recognition of the infinite, whereas increasing knowledge diminishes our stature more and more. In the beginning, we stood as giants with the whole, while we now see ourselves as dwarfs against the parts. Because experience partitions everything into piecemeal objects, we have come to believe and to assume that the sublime can be reassembled from the pieces."

CB:

Beautiful. I think that's a perfect way to close it.

NS:

Alright. It's a pleasure.

CB:

Thank you, Nevin. I appreciate it.

NS:

Thank you.