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Oral history interview with James Carpenter,  
2008 February 25

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**Contact Information**

Reference Department  
Archives of American Art  
Smithsonian Institution  
Washington, D.C. 20560  
[www.aaa.si.edu/askus](http://www.aaa.si.edu/askus)

# Transcript

## Preface

The following oral history transcript is the result of a tape-recorded interview with James Carpenter on February 25, 2008. The interview took place at the artist's studio in New York, New York, and was conducted by Jo Lauria for the Archives of American Art, Smithsonian Institution. This interview is part of the Nanette L. Laitman Documentation Project for Craft and Decorative Arts in America.

James Carpenter and Jo Lauria have reviewed the transcript and have made corrections and emendations. The reader should bear in mind that he or she is reading a transcript of spoken, rather than written, prose.

## Interview

JO LAURIA: Interview for the Archives of American Art, February 25 [ , 2008], Monday, at James Carpenter Design Studio. Interview with James Carpenter by Jo Lauria.

So James, would you just pronounce the way you'd like your -

JAMES CARPENTER: Sure, James Carpenter.

MS. LAURIA: Okay. And today we're at your design studio here in New York at 145 Hudson Street, and we'll just start with the basic questions. Where and when were you born?

MR. CARPENTER: I was born in Washington, D.C., in 1949, Walter Reed Army Hospital.

MS. LAURIA: Your father must have been in the military?

MR. CARPENTER: My father was in the service and my grandfather - both doctors - and serving in Washington during the war.

MS. LAURIA: And could you describe your childhood and family background, with maybe a slant towards if you had support early on for any type of art in your family? Were your parents advocates of your art interests?

MR. CARPENTER: I was born in Washington, D.C., and then soon after - my father was a doctor in both Massachusetts and Vermont, primarily Vermont. And I was brought up mostly in Vermont before going away to school. And I wouldn't say that I had any particular emphasis on art at the time. My mother was actually quite design-oriented or artistic in a way, doing paintings and things of that of her own, but I don't think that I was necessarily overtly influenced on that by her. And very early on, I thought I wanted to actually be an architect and went away to school - high school, basically, and from Vermont down to Connecticut.

And at that school, I'd met a fellow who taught Greek, actually, and had him for the four years. And he was also very, very influential in terms of working with some students who were involved in poetry and, sort of, the arts, and he very, sort of, strongly encouraged me at the time of graduating from Choate [Choate Rosemary Hall, Wallingford, CT], which was the school I went to, to think about going to an art school, because I had started to do more sculptural things and painting things with the art program at the school. And then I guess my options for college were, sort of, some of the likely suspects in New England, and then also the Rhode Island School of Design. So I went to RISD [Rhode Island School of Design, Providence, RI], and I guess I was probably the first person to leave that school - going to an art school anyway. So I ended up going to RISD and -

MS. LAURIA: You were the first person from Choate?

MR. CARPENTER: To have gone to an art school, right - [laughs] - at the time, which would have been '68, basically, at the time, and then went to Rhode Island School of Design. And at the time of my going there, I went originally in architecture, thinking I wanted to get into architecture, and then I sort of spent my freshman year in a - they have a program where they try to get everybody together doing a foundations program, so you had exposure to ceramics and woodworking and metalworking. It was exposure to all of those things, including, sort of, basic 2-D and 3-D design classes.

So I stayed in architecture, and then the sophomore year I was still in architecture for the first semester. But during my freshman year, I became very fascinated with the glass program that they had there at the school. And at the time, it was run - actually it was originally run by Norm Schulman, who was the ceramics teacher at RISD for many years, and he had started the glass program. And then the year that I arrived in school, a fellow named Ian Nelson, who was a Scottish glassblower, was running the program.

And then at the beginning of my sophomore year - during my freshman year, I went and took a couple - dabbled

around some weekends and things to sort of think about glass, and then during my sophomore year, actually, Dale Chihuly came back. He had been a graduate student - had been in Italy the year that I was a freshman. Then he came back to teach just when I began as a sophomore and got sort of enthusiastic about the material, and then he and I got very, sort of, involved in working on projects together quite early on there. So I basically, sort of, shifted from architecture into what would be the sculpture program, and the glass program was sort of a subset of the sculpture program. So that was sort of it - it was sort of like this - just natural interest, I think, in becoming more involved with working directly with materials, and then glass in particular was quite exciting. I think exciting because it was a very, very small program; it was literally just starting, and there were, like, two or three people in the program.

MS. LAURIA: And wasn't that one of the very few institutions that actually offered glass, because Pilchuck [Pilchuck Glass School, Stanwood, WA] wasn't even born yet?

MR. CARPENTER: No, this was - yeah, this was several years before Pilchuck. Yeah, that's quite right. I mean, there'd be, like, RISD; there's obviously the University of Madison-Wisconsin, the University of Wisconsin, where Harvey Littleton was. There was, I think, a small program in Toledo that Nick Labino ran. And then out in California there was Marvin Lipofsky at - actually, at Berkeley at the time. There was a program at Berkeley and that was probably about it. There may have been a couple other small programs here and there, but that was, for the most, part it.

And I think what was of interest about it, as a sophomore at that point, is that no one really had any preconceptions about the process. I mean, obviously, there's a process of glassblowing, and there is certainly a whole skill set necessary to execute that well, but, yeah, nobody was really hung up on specifically that craft of learning how to blow glass.

So a lot of the fascination with the program, I think, was that you - by the very nature of it being such a small program, you had to learn everything about the material. You were building the furnaces, building the annealing ovens, mixing the raw materials, understanding the whole thing about burner technology, and then just the whole process of making the material, in addition to trying to figure out, once you've made the material, how you can manage it and, sort of, manipulate it. And that, sort of, I think, led to a lot of explorations, which Dale and I did together very early on. A lot of those very fluid pieces with neon inside them, and, sort of, not focused on glassblowing at all; it was more focused on the fluidity and organic character of the material.

MS. LAURIA: And it must have been a very exciting time, because you're in this nascent part of a movement, which you don't even know is a movement yet. But it's -

MR. CARPENTER: Yeah, I had no idea. It was just this great interest in the material, which, I think, you realize hadn't really been explored very much, and then we just kept, you know, pushing different things to try to look and see what can be done with it, you know?

MS. LAURIA: And did Dale bring back from Italy new techniques and technologies that might have advanced your understanding of glass technically and aesthetically?

MR. CARPENTER: I think Dale - Dale was - he worked at Venini [Murano, Venice, Italy] at the time and was over there, and he worked, actually, I think, more as a designer and actually did a lot of design work at the factory. I don't think he really was that involved in glassblowing, per se, when he was there. He was more of a design execution. But I think what Dale brought was really just this enthusiasm for the material and sort of opened up, I would say, a different avenue for how you might enter into a field that, you know, hadn't really been very well defined. I think he was coming at it very early on more from a fine-art design perspective, and wasn't really coming at it as a craft perspective. So that really influenced everybody, I think.

MS. LAURIA: Well, all the people that you've mentioned, Harvey Littleton, Labino, and Lipofsky, they really are known for studio glass work and yet -

MR. CARPENTER: Right, right.

MS. LAURIA: - you must have veered at some point, because your work really is - it's not divorced from studio glass, but it is really a whole different category of using glass.

MR. CARPENTER: Right, right, right.

MS. LAURIA: It's not typically what we think of as studio glass, where an artist is working with vessels or sculptures and a studio kiln as one individual.

MR. CARPENTER: Right, right, right.

MS. LAURIA: So when did that separation happen for you?

MR. CARPENTER: Well, I began working actually, yeah, with Dale, and we did a lot of work together for probably about five or six years, I guess, but we worked through the years I was at RISD. So the sophomore year there and junior year at RISD, and then in 1971, he was the beginning of Pilchuck Glass School. So I went out to Pilchuck at that time and I built all the equipment. And I did all the very first equipment stuff out there and went with Dale, and we all, sort of, built our own houses for the summer.

And then I had an opportunity from RISD. They have something called European Honors program, so for your senior year, you could basically go to Italy. They had a campus in Rome, and you could organize your own program of study over in Italy. And I left after '71 and went to Italy, and I actually went to work for Venini. And then at that time, I was very interested in design, I think, and I was also very interested in the skill of glassmaking and glassblowing. So I actually did - when I was in Italy, I spent a lot of time working in the factory and learning some of those skills of glassblowing.

And then when I came back and then Pilchuck was sort of underway, you know, sort of introduced some of those ideas of how you start to work on a table. It's called a marvering table, which wasn't really used in this country before. People were using more of these wooden blocks to, sort of, form the glass, whereas in Italy, the tradition is much more of always standing up. You don't sit down quite as much when you're making the glass. So I worked in that area, and Dale and I continued to work together.

Marvin then invited me to teach, when I came back from Italy, at Berkeley, so I taught there for a semester, which was sort of in the sculpture department; the glass program, which was in the sculpture department. And then after that semester, I went to the University of Ohio for a semester to teach. And then I went back to RISD to teach, and then I ended up teaching at RISD for about four years. And I think my interest - I guess I probably have skipped one major interest in my life, which has always been sort of parallel to working with glass. And that is I've always had a very strong interest - going back to high school basically - in a different sort of natural sciences basically, like in physics and natural sciences. And a lot of that had to do with botany at one time.

So when I was actually at RISD as a student, and I used to always work in the summers typically, like, down in South America. I worked for a fellow in South America collecting plants and collecting animals and stuff. So the school, Rhode Island School of Design, had a very small natural history museum, which they teach drawing and teach different things regarding, sort of, camouflaging systems and migratory systems and things like that.

MS. LAURIA: Interesting that they teach that in reference to illustration, such as botanical or scientific illustration.

MR. CARPENTER: Yeah, exactly. Yeah, there's a very - you know, sort of an observation of drawing plants, or bone structures, or whatever. It's one of the foundation programs, basically nature drawing. And when I had been a student at RISD, the woman who ran that museum, I was sort of like her whatever - her intern, I guess, basically. I just spent a lot of time there, and then every time I'd go off on one of these trips, I'd bring back things for the collection - her collection. And then she then was about to retire and, sort of, asked if I would take over that museum. So I came back to RISD in 1973, and I ran that museum for about four years and taught drawing, basically. But it really gave us a chance - Dale and I continued to work for a couple of years at that time.

But my interest in natural history had a lot to do with photography and film, how you film sequences of events that happened in nature. And I don't know if you've seen this book that's been published, but I did a lot of film projects where you might - like one of the ones that was shown quite broadly is done out in - when I was out at Pilchuck, actually, it was done at a small river in Puget Sound [WA]. There's a small salmon river that was managed by the University of Washington [Seattle, WA], and then we set up a series of cameras over the river and photographed down into the surface of the river and basically -

MS. LAURIA: The movement.

MR. CARPENTER - captured the fish moving from one film frame to the next film frame.

MS. LAURIA: Would you mind just mentioning the name of the book and the author?

MR. CARPENTER: The book, yes. The book is called Environmental Refractions [Sandro Marpillero. New York: Princeton Architectural Press, 2006] and it's on my work; just James Carpenter: Environmental Refractions. And the author is Sandro Marpillero, and he's an architect.

MS. LAURIA: And how did that come about?

MR. CARPENTER: The book was something this publisher [Brikhauser] in Germany had wanted to do for quite a

long time. They had been after me for six or seven years to do a book on the work that we were doing in my studio. And I guess as probably the case with everyone, you never really feel like you're ready to do a book, so you keep working and you never really completed the job you think is most important to your career, so you put off the whole process, which is quite lengthy. But ultimately -

MS. LAURIA: It's like doing a retrospective?

MR. CARPENTER: Yeah, but ultimately -

MS. LAURIA: It's a scary thing. [Laughs.]

MR. CARPENTER: - we pulled it together. And we pulled it together, I think, more from the point of view that we weren't trying to do a compendium of everything you've ever done in your life. It was more like selecting three, sort of, categories of work, one of which is this early film work, which has, funny enough, a very clear influence and, sort of, reflection within the work that I do in glass, and this whole idea about how - and I should explain what my attraction to glass is, too, because that's probably the most important thing.

But the film work was all about taking events that occur in nature, documenting them, and then synthesizing it in some way, either changing the timing of the film and then bringing it back into a gallery or museum, and then re-showing that information. And the realization was that when you took something - you observe the nature and then extracted it and re-showed it somewhere else - you could, in fact, see a different series of - a different quality of information in the image than what you actually observed originally. And what was evident in this sequence of films of these salmon moving up the river is that, yes, you are looking at the surface of the water and you were certainly aware and clearly visible where the fish moving up through each film frame into a moment of darkness for the next film frame.

But what also becomes very evident when you see it in a gallery or something is that what you really are looking at on the surface of the river is this absolutely perfect reflected image of the sky overhead. So the surface of the water, in some respects, carries that reflected image as well as its somewhat optically distorted image the water creates, and then you're looking through it to, like, another whole body of information.

And so for me, in a lot of ways, that glass is very much that type of substrate or membrane; that there's a lot of information, visual information, about our environment that's actually on the glass, or in the glass, in terms of reflected images coming from different places, and our eye typically doesn't allow you to observe a lot of that information. Your eye just wants to go through it and then view what's on the other side of the material, and the material, in fact, then - and this is very much how it has always been treated architecturally - the material is almost dismissed in terms of its material presence. The glass is very much treated as a totally transparent vehicle for observing what's beyond it, and the material itself is never really given any physical or aesthetic perceptual presence. And my interest in glass is that you really want people to understand that the glass itself actually has a whole world of, sort of, almost informative qualities to it, and it's not to be ignored, but it's actually, in fact, to be emphasized. So a lot of the work -

MS. LAURIA: Or exploited.

MR. CARPENTER: Yeah, exploited. So a lot of the work we do here in the studio is really about trying to do that. It's trying to find something that's happening day-to-day in the environment, whether it's urban environment or more of a natural environment somewhere, and then how, working with glass, you can actually make people more aware of these things that are, in fact, with you all the time, but you completely overlook them.

MS. LAURIA: Well, several things come to mind as you expound upon past projects: your way of entering because glass is the portal for you to have -

MR. CARPENTER: Right, to another -

MS. LAURIA: - a much greater world beyond.

MR. CARPENTER: Right, right, right.

MS. LAURIA: One is sort of like the [Michelangelo] Antonioni film *Blowup* [1966], where you're saying that you actually see something different when you have it recorded.

MR. CARPENTER: Well, it's exactly - right, right, right.

MS. LAURIA: And that way you're using glass as mnemonics in a sense, as people's eyes are trained to see the most essential things, I believe, because I don't think we can process so much information.

MR. CARPENTER: Right, exactly, exactly, exactly, exactly.

MS. LAURIA: So you want people to be more aware that the glass can record other elements of our environment.

MR. CARPENTER: Yeah. No, it can be a very, very powerful, sort of, vehicle to basically - it's very demonstrative in some ways. I mean, it can really, sort of, present another world that's actually in front of us that we tend to completely dismiss, you know, in that sort of -

MS. LAURIA: And it can be illusionistic, too.

MR. CARPENTER: It can be very illusionistic. It can be multiplicities of images. It can be layering of information. So it's quite complex that way. So -

MS. LAURIA: But I don't see your work as being the trickster. Somebody like Jean Nouvel, the architect from Paris -

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: I mean, his building for Arab Consulate, or cultural center.

MR. CARPENTER: Right, right, right.

MS. LAURIA: I think it's a wonderful statement for geometrics and opticals, but it's really much more about trickery than it is about perception and reality.

MR. CARPENTER: Right. Yeah, and I think a little more didactic in a way. I think that it's - I think, for us, there's something - or at least for me, I mean, it's - there is sort of this idea of a sense of wonder about the world around us and, like, how you - and that's a very odd word, I mean, "wonder." But there is something very extraordinary about our place in this world, day-to-day, and, like, how do you pull out of our day-to-day experience those events which are remarkable enough to basically mark your time, your presence at that location or your presence within that particular environment?

MS. LAURIA: And the film installation that you did early on at Pilchuck, at Puget Sound, reminds me of two projects that you do later. One is the building with the waterfall [Ice Falls, Hearst Tower, New York City, 2002-06] -

MR. CARPENTER: Correct. Right, right.

MS. LAURIA: - and then the other is the Battery Park [NY] building [Water Light Passage, Museum of Jewish Heritage, New York City, 2003-06], where you have the wall, the transparent wall, that actually mirrors the parallel environment that is going on in the harbor.

MR. CARPENTER: Exactly, exactly. The one project that you're mentioning is -

MS. LAURIA: If you would speak to those.

MR. CARPENTER: Yeah, the one project that you're mentioning is this project that we're looking at some images of, which is for the Museum of Jewish Heritage downtown. And just to give you a little background on this, it's right at the very tip of Manhattan and overlooks the harbor. And they had an original museum building that they've recently added onto it, an entirely new addition.

And the linkage between the old building and new building is basically this pair of walkways, one of which is obviously elevated up to the second or third floor and then one which is down towards the ground level. And they wanted to have the walkways basically provide a sense of repose or - you know, repose, or a way of, sort of, reflection, basically reflection in a philosophical way, between having spent part of your visit to the museum looking at the collection, which just, sort of, deals with Holocaust, and then moving into another part of the museum, which deals more with traveling exhibitions. And they chose two people to work on these. We were selected to do this upper portion of the bridge, and then this fellow Andy Goldsworthy did the lower portion of the bridge, which was sort of a garden piece that sits below it. So it's sort of a landscape element, and then this sky-water element above it, which we worked on.

And the film piece that we did at the top is, yes, related to those earlier works that were done, now, 30 years ago, where there's a video camera on the roof of the building and the camera scans the harbor. And the camera is actually preprogrammed to observe not the absolute brightest point of light reflecting on the surface of the water, but basically the fragment of water immediately adjacent to the brightest point of light on the water. And the camera is actually looking over a large area of the harbor, and then the image is greatly magnified. And the idea is that you bring into the museum this, sort of, fragmentary image of a small section of the surface of the water.

And we use these LED [light-emitting diode] images, so there's a large field of LEDs that is behind this piece of glass. And we intentionally took the LEDs and opened them up - the spacing between the LEDs to the point that your eye actually can't assemble the information that's moving across the field of LEDs; your eye doesn't understand it, in the sense of its inability to reconstruct the image. And then, only in the area of the piece of glass, where we've actually etched the surface of the glass - because the glass itself, by the very nature of diffusion, which is the scattering of light, sort of reassembles the image of the individual pixels, which are around it. And then you realize that the image that you're seeing is, in fact, a very large blowup, very abstracted, of just the surface of the water, with the light reflecting on the surface of the water. It just moves very quietly, and you basically become very immersed in this singular image that's an extraction of - if you were to look directly behind the wall, you, in fact, see the very harbor and water surface from which the image is derived. So there's this opportunity to take what's in front of you -

MS. LAURIA: Compare.

MR. CARPENTER: - and what you would normally observe, perhaps not pay that much attention to, but if you actually sat down and looked at this way that we took that information and sort of synthesized it and represented it, that actually shows you something totally different, and it provides a very different, I think, interpretation of what's in front of you, you know? So it's a vehicle for just a heightening and, I think, sort of refining and sort of delineating all of this visual information that's out there. So it's -

MS. LAURIA: So you were really mediating a passerby's experience of the exterior -

MR. CARPENTER: Right.

MS. LAURIA: - conflated with the interior -

MR. CARPENTER: Exactly and then -

MS. LAURIA: - and then amplifying it.

MR. CARPENTER: And it's on a bridge, and you can walk across the bridge and you see this view, and then all of a sudden you walk into this little passageway that has a very controlled sort of quality to it. It's like very calming, sort of white stone space that has this kinetic image of the surface of the water projected on one wall. And then as you move to the other side, you see the view again. So it's this very unusual sort of moment of time, and your passage across the bridge, where the outside view is brought in and, as you say, is mediated, and then you see it a different way, and then you pass through it. So -

MS. LAURIA: Well, it's very interesting that these new commissions are now coming up that incorporate architecture with an artist's perspective. When you mentioned Andy Goldsworthy, he's obviously an artist who has done a lot of earthwork and landscape.

MR. CARPENTER: Right, right, right. Who has - yeah - obviously love his projects and or - yeah.

MS. LAURIA: So do you see a movement, like in the 21st century, of utilizing the artist's eye more in these large urban commissions, where the developers or owners of the property think that maybe we should have an artist's visual take on the environment?

MR. CARPENTER: I mean, I can obviously, sort of, speak specifically about the trajectory of the work that I've been doing, and then we can go into that a little bit later. But I actually do see an opportunity for - and not just an opportunity, but actually sort of see an interest and almost a demand to have a richer, more evocative environment to be built around us. There's such an overt acceptance of just this continuum of building without having any sort of meaning to the building. I mean, much of this architecture we see executed today is pretty banal, certainly, and I think people do expect and really would like to see a, sort of, different level of interpretation of, like, what does building mean? What does architecture mean? How does it relate to me? How does it relate to this site? What's unique about this? The materiality of the building.

There are all these elements that go into architecture that - in 99 percent of the cases - is really, sort of, overlooked, and it's just, sort of, the process of building something, and it's almost by rote, you know, how it's done. So I do see an opportunity for more input by artists, and, I guess, conditioned on that is that - I mean, artists also, if in some respects pulled themselves away from that and are very much channeled into their own commercial worlds that, you know, are self-perpetuating as well. So there needs to be some way to cross things over. I think some people have successfully done it. I know Vito Acconci, who is a pretty good friend, you know, is very actively trying to figure out how to do more architecturally related work and to take on more and more responsibility on a bigger building project, and more influence on bigger building projects. So some artists are certainly trying to do that, and I see that as a potential.

MS. LAURIA: But since I mentioned earlier the waterfall building, I think we should revisit it while we're on that thought.

MR. CARPENTER: Yeah, I'm going to grab a book, too. Just one moment.

MS. LAURIA: We're pausing for James to go pick up the book, so we're going to reference some projects in the German publication which he mentioned earlier.

MR. CARPENTER: So I don't know if you'd seen this. Did Ben send that to you at one time?

MS. LAURIA: Yes, he did.

MR. CARPENTER: He did? Yeah, well, I brought that out because it does have in it, like, this film on the salmon migration, and it has certain illustrations of different types of work that we've done in the past. But I think that many of the projects in here represent pretty clearly what I'm, sort of, talking about. I mean, some of them are, say, in this process.

This project here, which was done for a family out in Minneapolis, it's sort of linking the idea of filmic animation and capture of image, but it's actually building it into a permanent wall structure, which is a field of lenses and mirrors that essentially bring the image of the sky down into the window plane, where the sky is directly above the window. The image is brought down into the window plane, and the lenses capture the image and project it into the building. So you end up with a window that is, in fact, carrying multiple layers of information about what is going on outside the building, although it's not necessarily what's immediately outside the window, because we take windows for granted, really. A window typically is, you know, how we associate ourselves with horizon lines, so we expect it to just be, sort of, a datum that we perceive is continuing.

MS. LAURIA: Well, it's a framing device.

MR. CARPENTER: Yeah, a framing device as well, but in the case of that window, it's really, I think, a little bit surprising that the information is coming from different directions, and then the window is, in fact, again, almost a mediator or an assembly - a fragmentary image of the surroundings that coalesced into this one frame. So you're seeing a much more complex reading of what's right outside the window, but in a way you would never see it if this particular window weren't there.

MS. LAURIA: And you're speaking of the periscope, right?

MR. CARPENTER: Yeah, this periscope window, yeah. So what you're seeing here - I mean, it's quite complicated - is that, on the one hand, these are almost like video monitors, but they're just lenses, so you're seeing the treetop as a direct projection, you know, like, in the building, the top of the tree. Simultaneously, you're seeing the shadowing of the leaves as the sun goes through that very same treetop, so that these leaves are the same leaves at the top of that.

MS. LAURIA: It's a composite then?

MR. CARPENTER: It's a composite of information. And then in addition to that, these disks that you see here are something which occurs typically only during an eclipse. Like if during an eclipse, if you - you've probably seen photographs of this - that if you look underneath -

MS. LAURIA: We just had one.

MR. CARPENTER: Well, if you look under a tree in the daytime, if it's a daytime eclipse, you'll actually - as soon as the light level goes down around you, you'll, sort of, see on the ground underneath the tree that, you know, the leaves have sort of overlapped within the crown of a tree. The leaves are all overlapping, and the sun is actually shining down through them. And then, a lot more frequently than you think, you look under a tree, and you'd see hundreds of images of the sun itself. The aperture between the leaves creates a pivotal camera feeling, so the sun image comes down and you can actually read on the ground the actual image of the sun with the moon moving in front of it.

So it's a - and it's happening all the time, and you only see it during the eclipse because the light level has dropped to the point where you can actually read this image on the ground plane. So if you were to walk outside on any normal day, that same thing is happening underneath a tree, but we can't see it. So this window is actually doing - these are, in fact, pinhole camera images of the sun. So what happens as we watch this, all of a sudden, this little jump over to here, or it jumps over to there; they jump all over the whole window, and it's just a function of the sun finding that one little aperture going through the leaves. And then, you know, a minute later the sun has moved, and then another aperture appears, and then another moves. These apertures keep appearing, and the sun keeps moving around. So it becomes a device which - as you've said, it's sort of taking



multiple things that are happening outside and just sort of represents them, in a way.

MS. LAURIA: It seems this kind of imagery that you're working with may, mentally, only have been possible with the advent of computers, because I think we've grown up in an age where we've learned about layering and about seeing from multiple perspectives. And it may have been cerebrally possible for you, but for most people, I'm not sure they can understand the complexity of it without having had that sort of preliminary engagement with a tool like a computer. And, I mean, it's just a tool, but it programs our eyes to be able to see much more than we could as individuals.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And also to understand that there are things in front of other things and things sandwiched between, and you can go deeper and deeper and deeper.

MR. CARPENTER: Exactly, exactly, exactly, exactly.

MS. LAURIA: So do you use the computer at all when you do -

MR. CARPENTER: But I think - yes, we certainly do. But if I could just say one thing, too, there's also the whole history of how - I mean, certainly the history of vision and how people have tried to understand vision, from the Greeks right up until today, and the same thing is true about representation. There are many, many theories about how we were observing things, I mean, what it is we were observing, because going back to an idea where a certain energy is given out by the object, coupled with your own vision, and basically the objects in your vision are sort of leading in the middle ground. And then you're interpreting the world as this sort of mutually, sort of - I guess almost broadcasting of information, this, sort of, meeting in some middle ground around your body, around your eyes' plane of vision.

And the same thing, too, I think, like just if you look back at painting, you know, even like early, you know, sort of pre-medieval painting or medieval painting prior to trying to establish the principles of perspectives, people were seeing things actually in a very different way. I mean, it's not to say that it wasn't right; it's just that we've tried to construct ideas of perspective that we think are correct, but it doesn't necessarily mean the actual observation is incorrect.

MS. LAURIA: You mean the earth isn't flat. [Laughs.]

MR. CARPENTER: Well, just the way they played with - you know, things didn't appear to be properly scaled or lined up, or there's -

MS. LAURIA: Right. It's the mechanics of -

MR. CARPENTER: Yeah, and in that way, I think it's a little bit like what you were saying, as if there was actually this idea of layering. There was a layering of things without necessarily the ordering of perspective, and I don't think that's incorrect. I think there's certainly a role for that idea of observation that we've somehow pushed over into, sort of, the physics of optics, which deals with perspective and view angles, and we try to always - we always try to distill a phenomenon down to a physical principle or a principle of physics -

MS. LAURIA: Some people try to do that. [Laughs.]

MR. CARPENTER: - and it may not be - you know, it is certainly a solution but it may not be the -

MS. LAURIA: Well, your buildings seem very layered, the way you use glass. I mean, the glass becomes, as you say, permeable -

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: - in more ways than one. You also use it as a cloaking device, sometimes, and sometimes as a sheltering device, and sometimes it's integrated with ecological issues.

MR. CARPENTER: Right, right, right.

MS. LAURIA: For instance, you know, the way glass, when treated or coated, can cut down heat or sunlight.

MR. CARPENTER: Right, right, or bringing in more light into areas that are otherwise shaded; that type of thing.

I mean, this is actually - this is a German foreign ministry in Berlin, and this is actually a relatively good example of quite a sophisticated construction. It looks very simple, but it's a fairly sophisticated type of construction. But it was all about how to bring more light into a space that faced north. And obviously in Berlin, north is pretty far

north. And the idea here was to construct the structure of the roof with daylighting reflectors that would take the light coming over the roof and bounce the light back in, and then floating the glass plane, which was the actual wall surface, is held in place by a series of cables, and then floating off that flat surface are these bars. Basically, these bars have a slightly different reflective glass that typically - from different vantage points, these bars reflect the sky image from behind you. So you're actually looking through the glass wall, but then there's also this overlay of the sky plane that's behind you, so you're intentionally, sort of, trying to juxtapose, literally, 180-degree views of the same plane that you're looking through it.

MS. LAURIA: So you actually get to see them in the back of your eyes.

MR. CARPENTER: Exactly, exactly.

MS. LAURIA: That is to say, the back of your head. This sort of direction that you have taken, James, obviously a huge confluence of science, organic and mechanical. Could you explain how you came to be so interested and so expert in this merging of the sciences along with the art, and synthesizing both disciplines into a unique creative expression?

MR. CARPENTER: Right, right.

MS. LAURIA: I mean, do you have formal training in optical sciences?

MR. CARPENTERS: Only a lot of reading - [laughs] - which, I guess, is training in its own sense. But I guess a couple of things influenced me quite a lot. One is, as I've said, natural history has always been of strong interest to me, and that includes not just natural history in terms of, you know, botany or, you know, ornithology or those types of things, but also in terms of physics or chemistry, has always been of great interest to me. So I've always felt somewhat comfortable in those fields from the time I was in high school, you know, until today.

But some opportunities came about for me that changed a lot, which was when we were - Dale and I were actually working at RISD and just starting the Pilchuck program. Tom Beakner, who was head of Corning [Corning Studio of Glass, Corning, NY], Steuben Glass, and the Corning Museum of Glass; he came to us and sort of asked us to maybe to try and design some things for Steuben. And Dale and I went up there for a few days and did some things. But then subsequently, Tom had sort of asked me if I might want to get involved in Corning, to maybe do some work with Steuben, but also maybe to look at - and this is a little bit my own way of having pushed the opportunity - sort of look at things that they were doing in their research area, which is called Sullivan Park, and how they might relate to other businesses or being back to Steuben, basically.

And I got very interested in this one person's work, who I had known of his work before. His name is Don Stookey. He's still alive, but retired a long time ago. And he basically invented the field of glass ceramics, which is, obviously, being a ceramist, you would know that you're sorting merging non-crystalline material with a crystalline material, and you can do it selectively through photographic processes. And he had invented a whole family of glasses called photoform glasses or photosensitive glasses and polychromatic glasses. And I worked with him for quite a few years in addition to doing my own film work here in New York and, you know, just doing some teaching and then trying stuff at Corning; sort of trying to make a living. I got very involved with working with him, and, I think, what became of interest to me and what in some ways probably clarifies my understanding of glass.

We've spoken about glass as being a substrate that can actually carry multiple layers of information that allow for a different interpretive ability in terms of defining our experience of a place. But I think working at Corning and particularly working with this fellow, Don Stookey, you begin to realize that glass is like ceramics, but perhaps not as dynamically apparent, but glass can take on millions of different forms.

And working with him, we did a lot of work where basically introducing chemicals to the glass solution during the melting process that are the same chemicals you use in photographic paper. It's, like, silver halide and gold chloride and, you know, manganese. I mean, all these materials are photoresponsive in the sense that they react to different wavelengths of light. And you put them into the solution of the glass, and basically when you melt that material and then produce the object or sheet, it is photosensitive. And you can actually then put a negative over it, expose it to X-ray or ultraviolet or whatever wavelength of light that you're doing, expose that piece of glass to those wavelengths of light. It still looks like a normal piece of glass, but it has what's called in it a latent memory. And they refer to it in these terms; it's called latent memory in the glass and, you know, dominant memory and, you know, subliminal -

MS. LAURIA: Is dichroic glass in that category?

MR. CARPENTER: No, it's not. This is actually where the glass itself, through the whole thickness of the glass, it's actually photosensitive, and then you can expose it either, you know, with a laser or just sunlight. And basically where the light passes through the glass, you can then heat-treat the glass, and then you can actually

selectively grow a crystalline structure. A passage of light actually becomes basically a ceramic material within a clear glass material.

MS. LAURIA: Wow, that's incredible.

MR. CARPENTER: So you have these remarkable properties. And I got very involved in working with him and doing a lot of this sort of work with him, hoping to get Corning interested in doing some of these things, either with Steuben - and then one of the things we were working on was a clear glass, and then using an ultraviolet laser just scanning the piece of glass. And then, where the beam of light went through the glass you heat-treated, you would end up with, like, a perfect louver right in the glass. So it was a clear piece of glass, but it had right in it, going through the thickness of the glass, sort of lines.

MS. LAURIA: And you used that in one of your buildings -

MR. CARPENTER: And you could actually change the angle. So if you're standing in the building looking out, you can look out, and as you look down, instead of the louver sort of stacking up and making it opaque, you could actually change the angle of the louver so you could look out, but the sun would actually see the building as being opaque. And we were working on some glasses doing that.

And I'm just explaining this as about how I came back to getting involved in architecture, is that Norman Foster's office had seen some of that work at some conference, or somebody had read something about it. And they then came to Corning and then I was asked to be in charge of this project for Corning, for the Hong Kong-Shanghai Bank in Hong Kong, which Foster was doing and he wanted to use this glass for the exterior of the building.

And that's when I realized that - I mean, I was doing my artwork, but I also sort of realized I knew a lot about the material technically, more certainly than architects would know, in that there was an opportunity to bring what I knew about glass into the architectural field, basically. And that's sort of when I moved from doing - this is like late '70s, very beginning of the '80s, where I stopped doing so many of the film projects of my own and then realized there was this chance to set up this studio to hopefully conceptually hold onto a lot of the same ideas, but move my understanding into a more collaborative role with architects to bring to bear, you know, what I understand about glass and how you could do something quite remarkable with it.

MS. LAURIA: And I noticed from your resume that you are an affiliate member of the American Association of Architects - correction - you're an associate member, and then you're an affiliate member of the Organization of Engineering.

MR. CARPENTER: Right, right.

MS. LAURIA: And I wanted to ask you about that. You've never -

MR. CARPENTER: I'm neither, but I've taught structural engineering at quite a few different architectural schools. I teach at the University of Stuttgart [Germany]; there's something called the Lightweight Structures Institute over there, which I've taught many times there; University of Pennsylvania [Philadelphia, PA]. But I should say that the reason that came about is - I mean, again, obviously an interest in physics and then structural engineering - is basically a pretty straight extrapolation of that.

I realized that, when I began working with glass, there was very little understanding of how to hold onto it as a material. I mean, I normally - what you see in these windows is how glass is used. Glass goes into a frame or subframe, and then it goes into another frame, and it's always used in a way that it, in fact, doesn't really have any structural or physical participation in the overall building project, basically; it's really an infill material. And for whatever reason that has happened historically, all the other materials we work with - I mean, like concrete or wood or steel - they're all very codified, meaning that you can get a steel handbook and it'll tell you everything you want to know about how you can calculate a steel structure to span this or about everything.

And glass in the architectural world is completely nonexistent. There's absolutely no criteria for like, how you work with it, basically. The only thing you had to do was keep out the wind, so the only load that was ever determined was, sort of, wind-load on it. And -

MS. LAURIA: So it was never seen as part of a structure that could -

MR. CARPENTER: A bigger picture. Yeah, a bigger structural participation. Right, it was just always an infill material. And coming at it from the perspective that we have spoken about, you know, this last half an hour or so, which is my desire to have the glass be preeminent in terms of its presence, so that you are fully confronted by and allowed to observe the phenomenon or, sort of, information that's in the piece of glass. That in parallel means you need to reduce the structure and to make the glass the thing you really pay attention to, and the structure becomes absolutely minimized. I mean, you don't pay attention to it. So a lot of the work I did in the,

you know, late '70s, '80s, through the '80s, was really how to work with this material structurally so you could reduce the physical structure of stainless steel or whatever it was holding it up and maximize the structural participation of the glass, so it became the really -

MS. LAURIA: The focus.

MR. CARPENTER: - the major thing you see, yeah, and that's very different than how people work with glass -

MS. LAURIA: Right.

MR. CARPENTER: - previously. I mean, most people - even if you look at a lot of sophisticated engineering today, a lot of people still put the emphasis on lots of cable and trusses, very active, robust structures, which are very beautiful, and then they basically - the whole principle of those structures is really just to establish a field of points, you know, in space to which the glass is attached, right? But what you're really looking at is this trusses and cables and all that, and what I'm after is really how to create the barest minimum of structure. I mean, the glass really is dominant.

And then there were a couple of engineers that I really admired, particularly this one guy [Jörg Schlaich] in Stuttgart, who we've been working with for 20 years, who also thinks that same way. It's like, try the pure, minimal structures. So a lot of my interest in terms of achieving sort of an aesthetic goal is - by the very nature of building something - also has to deal with the physics and deal with the structure.

MS. LAURIA: Do you think part of the antecedent or the buildup to this, for you, might have been the International style and Philip Johnson's house - you know, almost completely transparent house - or the idea that he felt, or that the architects of that era felt, that the exterior and interior should be one. And therefore when you're inside, you should feel like you're outside, and similarly the house becomes a transparent shelter, which is an oxymoron, actually.

MR. CARPENTER: Right, right, right. And that's why, to some extent, I'm not really interested in transparency, per se, right. And -

MS. LAURIA: But was that a step, and now you've taken it a step further?

MR. CARPENTER: No, I think if you look back on the earliest work of, say, [Ludwig] Mies van der Rohe - I mean, like on the Barcelona Pavilion [Spain] and some of those, he was consciously using the reflectivity on the surface of the glass as well as the cutting the stone and book-matching the stone so you actually have pieces of stone that, you know, look like mirror images of each other. I mean, he was consciously using that idea in all of the materials he was using, that there was, sort of, this extension of - there's always this mirroring or extension out into some other world. And I think he actually was pursuing something that was intellectually a lot more challenging and interesting. And then Philip Johnson's work, I think, is much more dogmatic in a way. It just sort of accepts some of those ideas but doesn't really explore them enough in a more complex way.

But I guess what you're pointing out is the thing that I'm in many ways trying to counteract. You know, we're trying to figure out how you can make people - I want people to be more aware of the differentiation between interior and exterior and not the negation of differentiation, right? I mean, I think there's -

MS. LAURIA: So you want the boundary to exist, but you want it to have some visual interest as it's existing.

MR. CARPENTER: Yeah, and I think, you know, going back to even a very seminal work in the work that I did with Ed Barnes, is a very good example of that, which is I actually look at the - I look at one of the most important things you can do, is how to make it very clear that there's something remarkably different between the interior and exterior, and that the boundary condition between the two is not simply a singular, non-presence of glass. It's not just this totally transparent thing, but, in fact, you can take that boundary and then expand it, so that it becomes almost like an interstitial zone that takes on more of an interpretive quality of defining the differentiations of those two different things; that's what I find, actually.

I find that much more interesting, that there's actually, clearly a difference, and, like, how does one interpret those differences? And this window is very simple and is very interesting how it came about, because the client wanted to be able to sit in this chapel - or not himself, but whoever was in this chapel - and be able to look out over this very beautiful landscape. Basically, they wanted a clear glass window so the window is totally clear; you can look right through the window. And then the whole thing came about, is how to take, in this case, using some of these different coated glasses, how you could build a structure -

MS. LAURIA: Is this similar to the louver system you were speaking of?

MR. CARPENTER: No, it's not quite, but these are just large, single pieces of clear glass, running vertically, which

are about two feet wide and they're about 30 feet tall, 35 feet tall. And in order to stiffen those very limber, tall pieces of glass, we inserted these horizontal plates every two feet to create, effectively, just a grid. And the horizontal pieces of glass are coated. They're like an interference coating or a dichroic-type coating, and the function of a dichroic coating, or these interference coatings, is that they take the visible light spectrum, and they can be tuned to do any range you want, but they basically take a portion of the light and reflect it and allow a portion of the light to be transmitted.

So what's happening here is the horizontal panels are taking the sunlight, a portion of it is being reflected, then a portion of it is being transmitted. And I think what's of interest about this is that basically it moves, obviously, around the space all day long, and then, of course, you have the phenomenon of walking in and it's overcast, you're sitting in the space, there's absolutely nothing happening; and then all of a sudden this thing begins to appear on the wall, or fragments of it appear, or you're sitting in there, it becomes like this, and then all of a sudden you see clouds moving across here, or a bird flies across there.

And it's actually a way of - it's very linked to cinema in a way, but it's, more importantly I think, linked to reconnecting you with what is out there in a very different way. It's sort of like bringing that information in and presenting it in a more abstracted form, and a lot of - you know, this is 25 years ago or something, this project, and it sort of ties into - you know, we talked about some historical precedence before - it ties in a little bit to how I think about stained glass, which I think is very important because I look at -

MS. LAURIA: You see the spiritual quality of it.

MR. CARPENTER: Yeah, see, I look at stained glass in a way that I actually haven't read anybody, sort of, writing about it this way, but I did write a couple of articles about it a long time ago. Normally when people write about stained glass, it's really about the interpretation of the -

MS. LAURIA: Imagery.

MR. CARPENTER: - biblical images or whatever, and, frankly, I think it's much more about - it's very somatic, I think, in the sense that it's all about -

MS. LAURIA: Atmospheric.

MR. CARPENTER: Well, it's about imbuing the space with myth. It's not about the literal image that's there; it's more about the entire space taking on the sum total of this story or history, and the space itself is sort of imbued with that quality. It's at a very abstract level. And then you're, in fact, within that environment, and it's not just, you know, they were done so people could look at it and read it and - it's not that at all, I don't think. And it's much more about this, again, reconnection to something that's much more powerful, and powerful in your experience, and then in a way that little chapel project was about that. It was about how you try to capture that idea in principle but in a much more modern way.

MS. LAURIA: Glass, in your vocabulary, seems like the beginning of the alphabet. The glass -

MR. CARPENTER: Yeah.

MS. LAURIA: - is -

MR. CARPENTER: Is the vehicle or that -

MS. LAURIA: - is the vehicle for different kinds of projections.

MR. CARPENTER: Right, right.

MS. LAURIA: And I'm just going to stop there so we can change tapes.

MR. CARPENTER: Okay. Okay. [Laughs.]

[END MD 01 TR 02.]

MS. LAURIA: This is disc number two, interview with James Carpenter at his studio, the James Carpenter Design Associates, in New York City, and we will continue.

So James, we did talk a little about the fact that you're not a member of the architects or engineering, but you are a member of the International Society for Glass Technology -

MR. CARPENTER: [Laughs.]

MS. LAURIA: - and that's really interesting. First of all, I didn't know there was one, and what do they do and -

MR. CARPENTER: Right, right. The International Society for Glass Technology is actually based in England, and it's primarily ceramic engineering, really. It's ceramic engineering, which includes glass engineering. And, you know, much like say Alfred, New York, where this big strong ceramic engineering and glass engineering program - it's basically sort of the entity to which most all scientists working in those fields - you know, how they participate with each other, internationally through papers and publications and, sort of, annual meetings.

And I became involved in that back at the time that I was doing that work on the photosensitive glasses, so I still, sort of, belong to that and participate in those things. But I just find it very of interest just to keep up on certain aspects of glass technology that is of interest to me, so I just, sort of, participate for that reason.

MS. LAURIA: And have you found that, in the course of the last 30 years of your working career that there have been other artists and architects who now have interest in the same fields that you do or interests in using glass in a similar way? Or you -

MR. CARPENTER: Oh, I think so, yeah. No, I think that's definitely - I thought you were going to ask me about the International Society. I don't know of anybody else who belongs to it that's not a - [laughs] - glass engineer or a ceramic engineer. But I think, without question, there's a lot of people today, I think, trying - you know, working, maybe not in the exact way we work, but trying to find ways of making, you know, built works more responsive or more - I'm not sure what the term would be - but, I mean, just a little more, sort of, giving in terms of, like, what they do in terms of their presence in an environment.

That's definitely happening. I mean, there's a lot of work - you know, we did a lot of work in the '70s and '80s with dichroic glass, and I haven't really worked with that for a long time, you know, 10 or 15 years, but there's certainly, like, a lot of people out there today doing that type of work, which is out there. And some architects or some engineers are doing a lot of exploration these days, obviously, with structural glass. I mean, a very good example is, like, say, the Apple stores, which you're probably aware of. I mean, a lot of that's based on a lot of stuff we did here 15 years ago, in terms of the early fittings and the techniques for doing some of those things and some of the structural glazing ideas that we did for early stairways, you know, literally done in 1990 or 1989. But I think it's a lot of people. I mean, glass is a fascinating material for people, as it should be. I'm not quite -

MS. LAURIA: So architects aren't necessarily taking it for granted anymore that a glass is a pane that goes within a structural frame?

MR. CARPENTER: No, I think everybody - no, I think there's a lot of exploration, and that's sort of coupled with several things. I mean, one is that the industry has become more responsive, I think. The industry, certainly, 25, 30 years ago, they made a few products or materials, and then that's sort of what you had to work with. And in the intervening years, there has been much more effort on the part of what are called secondary manufacturers - people that do lamination or bending or coating, sort of all those types of processes that are done to basic glass sheets. That's grown enormously, and that's offered a lot of opportunity to do new types of things.

So, yeah, I think that sort of coupled with that. The industry is a little bit more desirous of experimenting and doing some new things, and I think architects, obviously, would like to have their buildings be somewhat iconic or signatory or somehow be differentiated from all the other buildings. So there's certainly an effort on their part to explore glass. You mentioned people like, you know, Jean Nouvel or Dominique Perrot. Certainly a lot of Europeans have done some amazing things, you know, [Jaques] Herzog and [Pierre] de Meuron and some of these people have really explored materials. I think materials, in general, has become a much more expressive component of architecture in the last 10 or 15 years, including ceramics or wood or concrete. I mean, all the materials seem to be having a bit of a renaissance, in terms of use.

MS. LAURIA: And do you feel in your design practice that it is necessary for you to investigate or even to push forward the idea of the green use of materials or ecological issues, and how do you deal with that, as an artist working within an architectural format?

MR. CARPENTER: Right. Well, that's - yeah. I mean, the whole energy thing is a huge sort of - almost a - you know, almost - whether you -

MS. LAURIA: Want to or not.

MR. CARPENTER: - wished to or not.

MS. LAURIA: [Laughs.]

MR. CARPENTER: I mean, you're basically sort of coupled to it inevitably, when you work with glass because, on

the one hand, you want to embrace daylighting and improve work environments or living environments through better and more conducive levels of daylight in a space. But then, concurrently with that, you're also burdened with the thermal performance of glass, which is, today, quite sophisticated in terms of the coatings, which can reject a lot of the thermal infrared end of the spectrum, but they allow the visible spectrum to come in for daylighting purposes.

But I think that, in our work, we have always been sort of linked into a desire to have the work represent a greater connection to nature and be responsive to nature and, sort of, be responsible environmentally as best we can, and we try to do that here in our studio in several different ways. Certainly in every project you try to do it, but we have a couple people here who are basically sort of Ph.D. people who are mechanical engineers and involved in that area. They're not architects and they're not artists, and they're not working that way. They do more analytical work within the studio. And then we have three mechanical engineers here in the studio who are from a firm in Stuttgart, Germany, [Matthias Schuler, Transsolar] that belongs to a friend of mine, who runs what I think is probably the leading firm in the world in terms of environmental engineering on buildings.

And he has been a friend for 20 years, basically, and we've always tried to creatively figure out how you can make a building not only perform better environmentally, but to explore ways of creatively doing things that are also aesthetically very interesting simultaneously. So we've done that on a few projects, but just having their presence, you know, in the studio is very helpful in terms of advancing projects, sort of, in parallel. I mean, you're advancing them aesthetically, and you're advancing them in terms of structural engineering or advancing them in terms of the mechanical performance, as well. So we try to do that.

MS. LAURIA: So I know that you work with architectural firms -

MR. CARPENTER: Right, right.

MS. LAURIA: - and could you just walk us through the process of when you come on board? Usually it's the very beginning, of course, but I mean, how does that happen? For instance, you could talk about the Ground Zero Project.

MR. CARPENTER: Right, right. Well, actually, just to touch on what you had asked before about I'm sort of this affiliate member or associate member of the AIA or the American Society of Structural Engineers or Civil Engineers. Yeah, not being licensed in either of those fields, you can only be an associate member, an affiliate member, and I'm not a licensed architect or structural engineer, although we obviously participate in those fields quite a lot.

And I would say that one thing - just to clarify it - that one thing that I think that's been somewhat successful relative to finding opportunities or having opportunities presented to us to work on, one thing that seems to have been, sort of, interest is that we're not architects. We're not - I mean formally; we're not formally structural engineers and we're not really formally fine artists, because, you know, we're not really building work for a gallery and we're not really occasionally participating in that world. There's a museum show or something but pretty rarely. So we're really bounded by these three, sort of, fields, and I think are quite knowledgeable in any of those three, and then somehow having that ability to move between them, I think, has been very helpful in terms of getting involved in projects.

But normally what happens - and this is sort of changing and I can explain that in a moment - but normally what would happen, say on this Tower Seven Project [New York, NY]; this is a project done by Skidmore Owings and Merrill, are the architects, and this building, obviously, is one of the buildings that collapsed in the afternoon of 9/11. And when it collapsed, the base of the building actually had a very major Con Edison substation in it, so a lot of the power distribution for not just the World Trade Center site but also significant parts of downtown were in the base of the original Tower Seven.

So when that building collapsed in the afternoon, we lost our power here in the studio and all our phones and everything because of this. The need was there very shortly afterwards, literally within a month, to rebuild this building and get this substation - really, the substation had to go up first, so that they could actually have power that could go into the World Trade Center site eventually and then into parts of the downtown. So the base of the building in this case is really an industrial substation, and I think that was really - that's, quite honestly, how we really became involved to begin with, is that David Childs, who is the principle of SOM [Skidmore Owings and Merrill], in charge of this particular project - we've worked together many times over the years. In fact, he gave me one of my very first commissions back in 1978 or '79, so we've known each other for a very long time. He wanted us to get involved in it and we did get involved in it.

First and foremost was about what you might do to the base of the building because these transformers are about six stories tall and they generate a lot of heat. And we had to come up with an idea for a skin, basically, around the base of the building that would allow for 50 percent natural ventilation. They have to be naturally ventilated. So we eventually came up with this whole stainless steel skin that, you know - I can show you

samples of it here - that allows the transformers to breathe. But simultaneously, it has to be a skin that's 50 percent open but your eye would read it and perceive it as being a solid surface, because one of the first things everybody realized here was that -

MS. LAURIA: Nobody wanted to see those transformers. [Laughs.]

MR. CARPENTER: Exactly, and as the World Trade Center collapsed, this part of downtown was -

MS. LAURIA: - exposed.

MR. CARPENTER: - was typically always defined by the podium of the World Trade Center. There was a superblock, right, as a big - it was actually like - I don't know, what is it, eight city blocks, I guess, or 12 city blocks, I guess, and it was a superblock that sort of took a datum line from one of the roads along, like, Church Street and then just projected that datum out towards the Hudson River. And when you're near Tower Seven, basically, the lower two or three floors of tower seven, you were, like, in the shadow of this podium of the World Trade Center all those years. And one of the main things that Skidmore did was the desire to reopen some of the streets to go through the World Center site, like Greenwich Street in particular, and that this building would have to be much more participatory in an urban design sense in terms of the greater -

MS. LAURIA: Not a monolith.

MR. CARPENTER: Yeah, the, sort of, the greater public, you know, street presence and pedestrian activity that would eventually grow down there. So that was obviously a big issue that was in play, and then the other component of that, if it was, like how - whatever would - gets developed for the base of the building, how does it then relate to a glass tower that's above it? And we basically sort of generated this principle of light, and the quality of light in downtown Manhattan might be a way of sort of saying or linking all these pieces together. There'd be a quality of light that's unique to that location that you would read on the skin of the building and within the building, and that would be carried through to the skin of the building down at the base here, as well.

And what we did - yes, and what we did is we basically came up with this idea that there would be a zone, which is not very deep - it's only about eight inches deep - between the outboard glass and then, sort of, the inner structure frame of the building, so the glass and the tower were seen as these individual, sort of, cassettes that made up each floor. So you just had these large glass planes that make up each floor, and then the glass planes was designed in such way that it sort of floated right by the floor slab. You'd have the floor slab of one of the floors - typically you would stop the glass, and then start another piece of glass and have a mullion across here at the floor slab, where you came up with a way to do this, which hadn't really been done before, where the glass actually goes right by the floor slab and then stops, actually, about 18 inches down into what's called the spandrel or structural section of the building, and then in that spandrel section, we designed a curved reflector.

Really, it's a daylighting reflector that takes the sunlight and bounces the light back up in underneath the glass so the building has a sense of volume to it. You have the sheer outer skin, and then behind it is this quality of light - daylight - sort of being reflected back in this cavity.

MS. LAURIA: So it gives it a sense of depth that -

MR. CARPENTER: Yes, there's a sort of volumetric quality, or a depth of light, in the skin of the building, and it clearly allows you to read these individual floors, and then at an oblique angle, you can sort of see the - you know, a stepping of the individual cassette. So it feels like these glass wrappers that basically are floating stacked on top of each other, and then when you come down to the base of the building, the stainless steel skin actually has two lives to it. They're sort of what you see in the daytime, which we're looking at in this photograph. So there's an outer skin that's 50 percent open that plays with ambience, sky brightness, and, sort of, reflective light coming off of the building, and then behind this layer of stainless steel, there's another layer, also, eight inches back. So at nighttime, there's actually a light that, sort of, illuminates that inner skin. So there's always - in the whole building, there's these two layers of light that run up the whole height of the tower. So -

MS. LAURIA: It's a whole different sensation.

MR. CARPENTER: Yeah, and then this is on the Tower Seven. So we got involved in the development of the design for the curtain wall and then the base of the building, which is stainless steel, and then the entries to the building, which is a glass cable wall system.

MS. LAURIA: Meaning the lobby area here?

MR. CARPENTER: Yes, the lobby area, right. So we did the exterior lobby and canopy here on the exterior and then, inside, worked with an artist who I've known quite a long time.



MS. LAURIA: Jenny Holzer.

MR. CARPENTER: Jenny Holzer, right. So with Jenny we worked on a way of - normally she works with LED signage. Typically you see it - well, I think, yeah, normally you would see it more conventionally, in the sense that they're, like, red letters on a black background, or it's more of a conventional LED system.

MS. LAURIA: And it's running, usually in a scroll.

MR. CARPENTER: And running, running, and running. And then what we wanted to do here, in order to, sort of, stay in the vocabulary that I was just describing about this volume of light, we basically designed a glass wall that has two layers of diffused glass. And then we took the LEDs - we sort of developed the LED system where the LEDs were printed on a circle cord and the LEDs are actually held in tension top and bottom. So there's no solid wall behind the LEDs. You can actually - the text -

MS. LAURIA: Walk behind them.

MR. CARPENTER: - yeah, you can actually look right through the wall and see people moving and, vice versa, when you're behind the wall, you can see the text moving and you can see the daylight, and so it's about how you can get the words to basically sort of float in this luminous volume. And so this whole idea of luminosity and volume of light is sort of repeated in different ways through the building, and I think in some respect it really gives the building a very interesting sort of reading and then a place visually and aesthetically. I mean, what's going on in the building?

MS. LAURIA: Have you - I'm sure you have, but I'll ask anyway - taken the opportunity to actually spend time in buildings that you've manipulated the exteriors of, to find out what it's like to be an office worker on that, you know, 12th floor looking out of that curtain of diffused light, and have you visited them during the evening times and -

MR. CARPENTER: Right, right. Well, this building we've obviously spent quite a bit of time on because it's very close to our studio, so we go down there quite frequently. And obviously, a lot of people want to go down to see it, and so we take them down there on tours and things. So we have had a chance to really observe this over, you know, a long period of time, which has been very interesting, which is somewhat funny from the point of view that, you know, I've had this studio in the city from 1979, basically - '78 - and for many, many, many years we never had any work in New York, probably until six, seven years ago - eight years ago. But I never had any work in New York - I mean, just a couple of little tiny things, but all the work we got was, you know, Germany or Switzerland or England or -

MS. LAURIA: Out of the country.

MR. CARPENTER: - somewhere else. Yeah, or something - maybe California or whatever but never really on any work in New York. And for a long time, yeah, the majority of all our work was out of the country. And then just recently, you know, obviously with this project and some others - you know, all of a sudden there's been this other almost inversion of that, where all of a sudden we've been very busy locally and probably less attentive to things going on outside of the country.

But normally - just to follow up on your question here, which was how we got involved in these projects - normally this would be the ideal way, actually, where we're involved extremely early. The architects came to us simply because, you know, we had a longstanding working relationship. They then introduce us to the client, who is Larry Silverstein in this case. We actually work for Larry Silverstein, so we're contractually working for the owner and in working sort of in tandem with Skidmore. So we're sort of - we're collaborating together but we're sort of independent in the sense that we're not really a consultant to Skidmore; we're sort of independent.

And then a lot of the meetings take place in the studio, so a lot of the meetings on this building would - we'd build the mock-ups and models and study the light conditions, then Skidmore or Larry would come here, and we'd have a lot of the key meetings about this building, you know, here in this studio.

MS. LAURIA: Well, obviously, you have to work around the architect's timeframe, as well. I mean, when they're ready -

MR. CARPENTER: Oh, no, you're absolutely developing this - you know, in this case - a very fast schedule, and in some respects, this building being fast was a great advantage. Also, the client here was someone who really wanted to try to do something exceptional, you know, so it was an unusual set of circumstances, right, that, you know, it's happening quickly, and they want to do something really exceptional, and, you know, we're trying to prove a point that you could move forward in this type of a situation if it weren't encumbered by so much political process and actually build a very nice building and build it very economically. So meanwhile, this whole building has been built and finished and occupied, and they're still deciding on what to do across the street. So it

was really almost meant to be sort of an example of, like, what you could do, you know, if you're -

MS. LAURIA: But that mandate was fast-tracked because of the transformers, really.

MR. CARPENTER: Yeah, well, they could have very easily - it was Larry's decision to go ahead and do the building. They could have just built the transformers and you would have just had this big block of concrete sitting there.

MS. LAURIA: [Laughs.]

MR. CARPENTER: Right, right.

MS. LAURIA: And this is a much better solution.

MR. CARPENTER: And it was to his - you know, and I give him, like, unbelievable amount of credit, because he constantly got torn apart by the press, very unfairly, and he - you know, he was very adamant about wanting to do something right and well and wanting to move ahead on it.

MR. LAURIA: So did he -

MR. CARPENTER: And then David Childs was a great, you know, sort of person to work with, as well, on this thing, so.

MS. LAURIA: Did Larry know of your work, or did David Childs?

MR. CARPENTER: He knew of our work a little bit but not to the extent that, you know, he eventually got to know it, and we've subsequently worked on some other buildings for him. But I would say it's something that's also changed in recent years. The normal - just to give a little history to all of this - yeah, typically we would have entered into projects either through the architect knowing about our work, or it could have been a one percent for art type of thing. I really actively pursued a lot of the one percent things for many years as a way of at least just getting a foothold into an architectural project.

In many cases, you know, the buildings aren't great, but you're sort of trying to do something within a fairly finite area that can, hopefully, change the quality - or it certainly can't change the building, but it can certainly change a particular part of the building pretty significantly. And then just gradually, you know, there were also architects whose work I very much admired, and I made a point of trying to meet them and let them know what we were doing and interest in collaborating with them. And, basically it's gone through a lot of these types of projects.

And then today, to be honest with you, we have a lot of clients that come to us directly. So we are doing the architecture and we're not working with architects - yeah, where we actually are doing the building. One of our major projects right now is - well, actually two - this is a big tower that we're doing in Boston right now for a client and working with a local architect up there, but we're basically the designers of the building, and it's a very active, sort of, green building with a big garden on top. So in this case, we're basically, sort of, the designers for the building. And then another project is in Israel, where we're doing the Israel Museum.

MS. LAURIA: Oh, that's in here.

MR. CARPENTER: It's in there, yeah, so we're actually the design architects for that, and then we associate with what's called an executive architect.

MS. LAURIA: But you did get an AIA architectural merit award for Seven World Trade Center.

MR. CARPENTER: No, no, we get a lot - well, we get a lot of awards, yeah. [They laugh.] But, I mean, we're not architects. We can't really call ourselves architects either. I mean, everybody here - everybody here is an architect, and many of them are licensed, but I am not. And as the principal of the firm, you can't purport that you are doing architecture if you're not licensed.

MS. LAURIA: But I guess what my point with that was that you said that Larry Silverstein took hard knocks from the press, but obviously the architectural community recognized the significance of the building.

MR. CARPENTER: Oh, yeah, yeah, yeah. No, quite right, and I think, also, like the New York Times has come around and have been very praiseworthy. The Wall Street Journal did a great article on him a couple of months ago. Finally, people realize that all the problems down there have been political. I mean, it was [Governor George E.] Pataki and then, you know, Spitzer and Downtown Alliance and all of these groups -

MS. LAURIA: Well, one of the sentences that I marked when I was reading about Seven World Trade Center was

this one. And I'm sure that you had marketing help writing your brochures, but it says -

MR. CARPENTER: I wish we did. [Laughs.]

MS. LAURIA: Well, it's very well written. It says, "This continually shifting ephemeral color merging with the sky enhances the viewers' experiential perception of light," and I don't always want to make comparisons, but in my world of more of the fine art world -

MR. CARPENTER: Right.

MS. LAURIA: - I know that better than the architectural world, so forgive me if I do make these comparisons.

MR. CARPENTER: Right, right, right.

MS. LAURIA: But that reminded me very much of the objectives of James Turrell and what he's trying to do with perception; totally different.

MR. CARPENTER: Sure. Right.

MS. LAURIA: I mean, he's also very involved with the land and the earth as an organic composition, and he's manipulating that to change the viewers' perception.

MR. CARPENTER: Exactly, exactly.

MS. LAURIA: And I see that you're trying to do the same thing but using much more industrial processes and materials.

MR. CARPENTER: Right, and being able to do it in an urban - I mean, how do you do this? How do you bring about - obviously we're living in these -

MS. LAURIA: Boxes, glass boxes.

MR. CARPENTER: - very dense sort of environments, and we always think of these environments as being divorced from nature or divorced from a connection to nature. And I think what we're really striving to do is figure out how you reconnect people with nature in these environments. How do you really make this something remarkable? And then this building, you know, what's interesting - which I should have expounded on a little bit - was, what's interesting with having this building finished and some of the other projects we've done in the city, it has got a lot of comments from people, you know, who - you know, we're not architects or anything, but people just see these buildings. They just sort of - you know, they say, this is an incredible building. What I see - you know, the sunset. I saw this, that, the other thing. People, sort of, relate to something they've seen, you know, like in the building, and then they relay it to you, which is quite interesting.

MS. LAURIA: Well, I was going to ask you that question - if you've done surveys by the pedestrians walking by - I don't mean to say that it's reduced to the lowest common denominator, but there are certain people in our environment who are totally unaware of their environment.

MR. CARPENTER: Right, right, right.

MS. LAURIA: Do you feel that conceptually, intellectually, that some of the information that you've put into the building structure is lost on a certain amount of the population?

MR. CARPENTER: Well, that's a very good point. That's actually one of - one thing I usually talk about sometimes, about why I left the art world doing these - I used to show with this guy John Gibson here in New York, which was a really exciting time. It was like Vito Acconci and Dennis Oppenheim all sort of showing the same - we're all in the same gallery at the same time, a very exciting time through the '70s.

At the end of the '70s, it became pretty obvious the art world was sort of shifting more towards expressionist paintings like Sandro Chia. And all these people came in, and there's, like, a real sort of suppression of, or at least lack of, support for, sort of, conceptual work, you know, in the late '70s. And I realized that I spent a lot of time doing these film installations, and you're obviously doing them for a pretty, obviously, small and preconditioned audience. So, I mean, you're presenting it to basically your colleagues in many ways, in terms of, like, what they expect to see and all that.

And what did interest me a lot, and still does, is, like, how you can take a conceptual idea and somehow shift it into the public realm so that it is being experienced - hopefully, or perhaps not, you know, by some people - but you move it into a realm where you're actually affecting a completely different and varied audience, right? I mean, you certainly have people who would immediately see it and recognize that there's something different

happening. But I think what you're really trying to do is you're trying to connect with those people who, you know, may not be so attuned to that type of observation or sort of analysis of what they're looking at and that they just sort of see something and say, my God, there's something I haven't seen before, and it's remarkable and sort of - and they carry that away with them. And I think that's a great challenge to, sort of, do that, you know?

MS. LAURIA: And there also must be some very fine line, like in your residential project, let's say the window in Minneapolis, in the private home.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: Is there sometimes a tightrope you have to walk between balancing what is too much information and what someone could actually absorb, because we are experiencing an information overload, and sometimes you want to cloud out.

MR. CARPENTER: Right. Well, I think that's also related to - I mean, on the one hand, you, like you said, residential. A residential project you are dealing with, in this case, a couple who are great art collectors and had built this beautiful home right near the Walker Arts Center in Minneapolis. And you're dealing with people who are attuned to looking at art but it's also something they look at every day, and it's changing every day. So all day long it's a different thing, and they can actually - and I think that's its power. Its power is that it's redefining itself constantly, seasonally, daily, hourly. You know, it's sort of presenting you with a different thing all the time.

They love that. I mean, they've sort of - first thing they do is bring their houseguests over, like, look at this window, and even at nighttime it works. You can actually see the moon - if you look at that whole wall, it's like, you know, 80 images of the moon projected directly into the house. So they really got into that. You know, that's just only to say that within that sort of a context, I think great variety and complexity can be appreciated, because you have the time, basically, to observe it and understand it over longer periods.

MS. LAURIA: And you have the intention of doing that.

MR. CARPENTER: Right, right. And then on the public works, I think you do want to distill it down slightly so it's not trying to be so complex. But you want it to be perhaps more focused and sharp in terms of its ability to prick someone's awareness, you know, in some way. Nonetheless, though, you're also dealing with qualities of animation and activation and change, because it's just the very nature of working with light. I mean, it's totally different all the time.

MS. LAURIA: Well, another artist that I mentally begin to associate with - and not that your work is like his, or his is like yours, but the artist I'm thinking of is Robert Irwin, because the whole space in light -

MR. CARPENTER: Yeah, I mean, these are people's work -

MS. LAURIA: - you know, the idea of dematerializing light.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And you're not dematerializing it; you're manipulating it.

MR. CARPENTER: Right.

MS. LAURIA: But there is the idea in one of your projects, which I thought was really interesting, maybe it was in Berlin - where the sides of the building, because of the structure of the glass that you used, almost become so diffused that the building tends to disappear into its environment.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: And I think that's an interesting concept, because a lot of people feel that we're - you know, as our scale - human scale - we're living amongst these skyscrapers, the steel and glass, and they feel very foreign and monumental to us. So to be able to look at something that begins to sort of disappear -

MR. CARPENTER: Scale. Right, right.

MS. LAURIA: - in scale is kind of a nice idea for scaling things down to our own level.

MR. CARPENTER: Right, right, right.

MS. LAURIA: I mean, is that a direction you want to move into, as well?

MR. CARPENTER: Well, I think there's something - I think the project that you're talking about might have been one in Bonn, Germany, which was actually in -

MS. LAURIA: I knew it was in Germany.

MR. CARPENTER: It was in a park, and we quite literally were trying to work with the idea of the surfaces that are only - how do you say it - sort of intermittently reflective, meaning that there's a field of reflectivity, but it's actually condensed down to a series of rectangles that are floating on a larger surface, so that when you look at the surface - the idea in that particular project was that if you looked at the surface, the smaller reflective panels or elements would reflect the part behind you. So when you looked at this glass surface, there was a fragmentary image or pixilated image, let's say, of what was behind you, the park or the sky. But as you looked through the glass, you actually saw the reverse side of that same rectangle, which was, sort of, the sky-blue color and that merged with the sky.

So there was very clearly this idea that the glass plane, which was capturing a sky image on one side and then a reflective image of what is behind you on the other side, which also had sky images, almost like they were sort of like passing through each other and then, sort of like, how you perceptually, you couldn't read where the surface - what is it that you're looking at? You couldn't quite perceive what it was you were looking at, although it was all the materials around you, and this is sort of a different thing all together.

MS. LAURIA: I love this idea of using water condensation or mist as a way of - it diffuses light, it distorts light, and you're using it in a much more complicated sense than that. But I also started this with referring to what is written in your book: "By focusing on the ordering and changing nature of light as it intersects mist, the threshold creates a luminous and ephemeral landmark that celebrates the landscape and the 2000 Olympics in the sky overhead." So luminosity and ephemerality -

MR. CARPENTER: Right.

MS. LAURIA: - are obviously two things that you do carry through in most of your projects, and sometimes you use water.

MR. CARPENTER: Yeah, and this was really - yeah, you know, we tend -glass is obviously something we do a lot of work with, although not exclusively glass. And then the interest here is just how - I mean, you sort of mentioned it a moment ago when you were talking about Robert Irwin's work, is that the great thing about light is, you know, it's completely invisible unless you give it a target. I mean, it has to hit something to reveal itself. And then in order to reveal it, I find it most important to come up with a way that the light reveals itself in a very dynamic way and in a very, almost sort of a mysterious way, that the light is something that's very ephemeral in that sense. It can sort of present itself and disappear, reappear. It has this great sort of flexibility to it.

And this particular project was really just a, on the one hand, a great experiment of trying to figure out how you could get objects to float in space. I mean, how do you get things to actually appear in space overhead, in a middle of clear, blue day or middle of the night? And what we did is these masts, basically, are over a small river below, and we're pumping the water up and filtering it, obviously. And then the top of each of these masts - about 10 or 12 feet tall - is stainless steel and sort of mists it, and you're really creating sort of this synthetic cloud, really. So the bridge access - all the people walking on the bridge and then this bar of masts, basically, creates a threshold that you're walking underneath. And the idea was - for the Olympics in general - was how to reclaim, sort of, a toxic landscape or, sort of, an industrial landscape; you know, like, how do you replant it? What plants can tolerate and purify the water systems? How do you deal with these - how do you reclaim something for the public good or the public benefit that was once, you know, some industrial wasteland, basically?

And one of the processes we wanted to call people's attention to was this whole idea of water circulation, which is evaporation, condensation, and then obviously the actual rainfall again, that whole cyclical process of water. And in order to do that was this idea that you create this synthetic cloud overhead, and then in the distance is this device, which is called a heliostat, and it tracks the sun all day long and it projects - you can actually target the sunlight. Wherever the sun is in the sky, the mirror will put it on the same spot all day long; I mean, the sunlight will always be in that same place. And in this case, we used a mirror.

This is actually a dichroic mirror, which you need to do because if this was just, like, a regular mirror, you actually wouldn't see anything here because you're projecting white light back into a fully illuminated cloud. The cloud is already under full sunlight and you can't actually supersede that. But if you actually filter the light here - like we let the blue light go through and then we're basically projecting yellow light back - your eyes, obviously, very sensitive to yellow - and your eye immediately realizes that there's - you're sort of giving it - you're upping the ante, basically, in terms of, like, the yellow spectrum. And then you see this bar, and then sometimes it's like a solid bar going through there and other times it's just fragmentary images. Sometimes the valley gets very, almost like full of mist, depending upon the humidity level. I mean, this bar just sort of goes right through it, but

you clearly see this thing of light that's just sort of sitting up in the sky overhead.

MS. LAURIA: So you're actually revealing the passage of light as it goes through -

MR. CARPENTER: Exactly.

MS. LAURIA: - the water that's been evaporated into mist.

MR. CARPENTER. Exactly, exactly. I mean, it's sort of what we see every day. You look up and see a cloud. It's the same thing. You're looking at the sunlight striking the top of the cloud and it's white and the bottom side is dark. It's the same principle. And this way, I was really trying to make people more aware of this idea of a threshold or passage and this phenomenon of water vapor, you know, which are actually tiny spheres of water, which are all little lenses, which creates the rainbow and creates all those things. So it's really, like, how do you synthesize those principles and create something?

MS. LAURIA: And on a grander scale, obviously. I mean, this is -

MR. CARPENTER: Yeah, no, we actually - we haven't done it yet but actually have figured -

MS. LAURIA: [Laughs.]

MR. CARPENTER: - out how you can make a rainbow pretty easily.

So anyway, it was like - you know, so it's on this bridge; I mean, there's that row of masts. So as you walk across the bridge, you get this, sort of, beam of light that appears and disappears, and it's obviously very weather dependent. So it's - you know, the mist can all be blowing one direction and you just got these, like, little spots of light or a long, sort of trail of light. And what you said is correct; I mean, the beam of light is there regardless.

MS. LAURIA: Right, we just don't -

MR. CARPENTER: And it's just like, what's in front of it, you know?

MS. LAURIA: Right, we can't always see it.

MR. CARPENTER: Like if you put your hand up, it would hit it - you know, you'd see it. But if you took your hand away, it's - you know, now it's there.

MS. LAURIA: It would appear as a yellow light on our hand?

MR. CARPENTER: Yeah, no, yeah, you know, a lot of times you can move light around with these devices. And it's there, but you have no idea it's there unless you put something in the way.

MS. LAURIA: Well, I was particularly interested, when I was reading your resume, that you worked with the blind.

MR. CARPENTER: Mm-hmm. [Affirmative.]

MS. LAURIA: And I didn't know in what capacity, because I was reading a scaled down resume that fits on one page - which kudos to you for being able to do that - but was that because you wanted to portray the tactility, describe what blind people feel through their hands?

MR. CARPENTER: No, I think it was more - yeah, more just try to understand what was missing.

MS. LAURIA: What seeing is?

MR. CARPENTER: Yeah, what's missing.

MS. LAURIA: And what did you learn from that?

MR. CARPENTER: Well, some of the people I had spoken to about it was just that, you know, the people that actually had had sight and then had lost sight, and that type of thing. And then what it is that they recall about qualities of light. And I guessed -

MS. LAURIA: Almost like your latent properties in glass that the eye, the retina, retains memory.

MR. CARPENTER: Yeah, you're carrying this thing, I mean, and I guess people do carry very powerful thoughts of light, like the potency of light and how it sort of influenced - you know, it's not just memories as sort of narrative memory, but it's much more like memory that's a very, very sort of powerful relative to experience. And I think that's sort of heightened, actually, by - you know, if you've lost your sight, I think it becomes a very heightened

sort of memory, actually, so -

MS. LAURIA: But all of your manipulation of structure, I guess, would be lost on the blind.

[They laugh.]

MR. CARPENTER: Yeah, no, that's just it. I guess one thing I was sort of interested in to find out, and I never got an answer to this, is that whether or not someone who is blind can actually sense the presence of light. Never quite got to grips with that. But that was actually the primary thing I was hoping to find out, but I never really - I mean, if you actually took someone - not so much you take them from a dark room to light room, but if you took them to a very wonderful space that was illuminated by -

MS. LAURIA: Would the sense - like they -

MR. CARPENTER: - is there a sensation there that's other -

MS. LAURIA: - like the hearing impaired who can go to concerts and they can still feel the vibrations.

MR. CARPENTER: - yeah, is there something - there's something that tells you about light that's not 100 percent visual, right?

MS. LAURIA: And have you - do you have any interest in or investigation into the blind because you have interest in wide-ranging fields of people who live in the dark all the time?

MR. CARPENTER: Well, I certainly do. I have a great interest in visiting those countries, which are - you know, like the Arctic Circle. I go every year, usually, up to Labrador or Iceland, Northern Russia or Northern Greenland, Northern Norway; I do the trip every year up north. And one of the reasons, of course, is the 24-hour sun, but also I've been up there in the winter, where it's, like, minimal light. And there's obviously a huge, huge appreciation for light, you know, up there and just how you describe light. You just - I mean, it's sort of well-known. The vocabularies for qualities of light are as complicated as the qualities of snow. I mean, that there's sort of this whole richness of sensibilities, you know, that are defined by light or absence of light. So -

MS. LAURIA: I was reading just, I guess, the headlines on today's Internet about Netherlands building a city underneath the ground, and it seemed to me to be -

MR. CARPENTER: Under the ground? Yeah.

MS. LAURIA: Under the ground. I mean, that's a new idea, and I'm sure there will be programmed in the idea of light reaching, because I don't think -

MR. CARPENTER: Yeah, of course. Yeah, right, right, right.

MS. LAURIA: - humans can really be nocturnal or - not entirely nocturnal - and can't live as cave people. We really are starved for light -

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: - and it, maybe in our molecular structure, we know we need vitamin D, which only comes from sunlight - you get terrible deficiencies if you don't have it.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: Since you aren't an architect or a structural engineer, I think that really liberates you to be much freer about the way that you can -

MR. CARPENTER: And thinking about those -

MS. LAURIA: - you don't have to think within the box, so to speak. You can think around the perimeters.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: So you're taking all of this into consideration and bringing it to bear on any project that you do.

MR. CARPENTER: Well, trying to - trying to assimilate, yeah, all of these different concerns. And that's sort of interesting when we talk about people living in the dark or whatever, just - I've always been struck by these people that do those experiments - they're sort of like psychology experiments - where you've got to live in a below-ground cave or something. And then they have control of their own lights, to turn them on and off, and then people get under these really extended - you know, staying up for, like, two or three days, not knowing that

it's - when there's no diurnal cycle, you know, to judge your time by. Right, the whole issue of time just becomes completely moved into some other world, basically.

MS. LAURIA: Right.

MR. CARPENTER: They'll stay up for three days, and then you sleep for two hours, and then you're up for another three days, and sleep for two hours.

MS. LAURIA: The kind of work that you're doing can really, in the future, be useful for businesses that want to operate on a 24-hour cycle, because you could manipulate ways where the people who would normally do what they call the grave shift. It's obviously called the grave shift because -

MR. CARPENTER: For a reason. [Laughs.]

MS. LAURIA: Right. [Laughs.]

MR. CARPENTER: No, exactly.

MS. LAURIA: Because it's so deadening to your senses.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: But you could see where you could engineer a curtain of a building so that you could manipulate that their night actually had the same sort of -

MR. CARPENTER: Right, right, has some other -

MS. LAURIA: - light qualities of people who work during the day.

MR. CARPENTER: Right. It's also something like, say, in a city like New York, I mean, we're talking about Tower Seven or some of these bigger projects, but there is also, within the fabric of the city, obviously, very dark, narrow alleyways, roads, especially when you get downtown,, a very limited amount of light entering into those parts of the city. And we actually have developed some ideas about how you can bring enormous amount of more light down into those zones where, you know, you're otherwise assuming that it's just this - constantly going to be dark. And that's a little bit what this, you know, like Tower Seven - little bit the skin on the Tower Seven was based on an idea about bringing more light into the street, because when you get down to these very narrow streets downtown, generally the light availability from those streets is, you know, sort of oblique. Like, this is the face of the building; there's typically another building directly across the street from you and hardly any light in this perpendicular direction, but the light availability is always out at the extreme.

MS. LAURIA: Peripherally.

MR. CARPENTER: Yeah, peripherally or, like, directly overhead. So not dissimilar to how that periscope window worked, which was to bring the image of the sky plane down into the window. You can then organize the skin of the building, which is what's happening here. The skin of the building, in this case, is made up of these prisms. They're like stainless steel prisms, and just by angling the prism at a slight angle, when I'm looking at them perpendicularly, the light is actually coming from down there hitting it, and then it's coming to my eyes.

So when you looked at the building perpendicularly, it's, in fact, actually reading all the light that's coming from a different angle. So there's a whole way which we're thinking about here. You'd almost program the skin of the building to respond to these sort of ambient fields of light that you would normally not associate with façade or, sort of, the building itself. You know, so there is a whole - almost like an applied optics principle that you could put on the building that would make the buildings read much more active and more lively, you know?

MS. LAURIA: But I think that - at least from what I gather from our dialogue - is that you're very much into understanding light and how it affects people, but translating that into much more abstract category and in avoiding the directly overt, the didactic -

MR. CARPENTER: Right, right.

MS. LAURIA: - you know, which is, I think, in a way maybe a simpler path, a much more direct path. And it also involves the idea of a lot of mechanics in mirroring. But the kind of mirroring that you're talking about is really, again, much more mediated. It's something that you're taking to different levels so that people intuitively understand it or maybe even, you know, through osmosis, but it's not purely didactic. How do you reach that decision on any given project? I mean, how do you take the initial first chance and then - not chance but the initial first plan, I guess, and then sort of move through the levels of abstraction so that at the end -



MR. CARPENTER: The end - right, it's something that's -

MS. LAURIA: That's more intuitive than -

MR. CARPENTER: Well, I think - right, right, right. Well, I think the other component to what you're talking about, too, is just scaling, which you mentioned earlier, which is, I think, very important here, is that a lot of these things are done - I mean, obviously - it's a big scale on the one hand, but you've actually broken down the actual -

MS. LAURIA: Module.

MR. CARPENTER: - the way it's functioning on a very small scale. I mean, the piece that's actually doing it is very fine. So you're basically looking at almost like a woven surface. It's almost like a - it's a grain that's very responsive, and in that sense, I think you connect with much more immediately, because of the scaling of it is more - I think it's more understandable in some respects. I mean, you could certainly do this on a larger scale, too, but then it begins to lose - I think it begins to lose its vibrancy, and it's the vibrancy that I think you respond to when you see it.

MS. LAURIA: Well, if you can do this, James, for individual buildings, I guess the next leap, for me anyway, as a writer or researcher, is to think about, well, why couldn't we have then controlled environments like Buckminster Fuller's Geodesic Dome, or the dome itself controls all of these perceptual elements so that the structures inside don't necessarily have to - or maybe they play off of or even contradict the permeable skin on the outside. I mean, is that something that architects now are looking towards, or is that just too futuristic or not practical?

MR. CARPENTER: No, I think there are certainly people that are operating on that very sort of futuristic - I mean, there's certainly people out there, like Future Systems or some architects from London, who are very much in the mold of Bucky's thinking. But I guess what I was going to say is that it's probably becoming more and more possible to do that. I'm just curious whether people would be readily willing to accept that, I mean, or whether there's constantly a desire to have a more individualized sort of experience.

MS. LAURIA: Experience.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And it's something that's more controlled. But -

MR. CARPENTER: That's not to say, though, that you couldn't create something that was, you know, sort of one scale - was managing some of these phenomenon or, you know, sort of performance-related issues. And then other things could be - by their very nature, not necessarily have to deal with that series of issues, but they could deal with more immediate, individual issues of another scale, and that's certainly possible.

MS. LAURIA: And - I have to ask this because I'm just curious, so I'll take the opportunity - do you have patents on any types of industrial processes?

MR. CARPENTER: No, we actually don't. We don't, but we've actually been thinking about a couple of things that we haven't quite put into play yet that I think could be patentable. I mean, a lot of these things probably could be patented, but I've always thought that it's better to - you know, I sort of was involved with a lot of these glass compositions and things that were certainly patentable and were patented by Corning, but I've always thought in the field of design that it is almost counterproductive to try to patent something because -

MS. LAURIA: Because it then locks you into marketing it.

MR. CARPENTER: - by the time - yeah, because then you're sort of buying into that being the state of affairs, basically, and you're sort of trying to defend that or expand its use of whatever you're trying to do with it. Whereas I actually find - and it's, sort of, hopefully, a little bit self-evident if you go through the projects - every project is a little bit different, and each opportunity can, in fact, give you grounds for investigating something differently, and then - so you just sort of keep going, and that sort of reflects on an earlier question you had about, you know, there are other - like on the dichroic glass that we did - the dichroic glass thing along time ago. And it's an incredible material and great, and there's probably 30 people out there today doing stuff that a lot of people think is an artwork but it isn't, you know. But they're out there doing it, and, you know, that's happening, so that's fine.

MS. LAURIA: So movement, not only in the sense of movement that one gets experientially from your buildings but movement through different phases or investigation is something that you find very important to -

MR. CARPENTER: Absolutely. Yeah, I just sort of keep pursuing things, and each project triggers - you know, we try to use - actually, it's one reason why we try to do smaller projects and bigger projects. Like that lens

periscope window is a perfect example. I mean, you're quite right; it's very complicated and it's - it's not that complicated, but it's got a lot of layers to it. I was just very interested in pursuing the idea of a window presenting information from different vantage points. That's sort of the underlying interest in that window. And in terms of smaller projects, we oftentimes find something or discover something in a small project that in some way -

MS. LAURIA: Can be extrapolated.

MR. CARPENTER: - can be extrapolated and then find its way into something different, you know, later. And certainly a lot of the early structural projects were smaller-scale things we could completely control, fabricate, test, do all these things that you'd never get a contractor to build it for you if you weren't doing it yourself and then you learned a lot about it, and then eventually you can apply it, and then you can eventually convince a contractor to take it on because it's been proven that it can be done.

MS. LAURIA: And have - just the last question on this - have you run into any particular issues with the city planners for testing for environmental impacts, such as earthquakes or wind, that you had to prove?

MR. CARPENTER: Well, no. Yeah, all the stuff we have to do all has to be engineered and tested for those things, including blast and, you know, all that. Like the entry to this building is a very unique and new system to deal with blast protection on buildings, and it uses - I don't know if you saw that - the entry uses a cable structure.

MS. LAURIA: Right.

MR. CARPENTER: The glass is held on cables, and the whole principle there -

MS. LAURIA: Oh, to diffuse the blast.

MR. CARPENTER: Well, basically it dampens the forces, right? I mean, it actually - if you - there's two ways of dealing with it. One is you make a very, very rigid, solid, robust, massive structure that resists it just through brute strength of the structure, or you can actually approach it completely differently, which is, well, you want to absorb the energy and react to the energy and then return to your original position. So these cable nets actually - they move with the wind and they also move with blast forces. Then the whole innovation on that wall was on how the glass is laminated, and then in the corners of the glass are these fittings that are made out of Kevlar and carbon fiber that actually mechanically connect into the stainless steel fittings. So the glass panels can actually - if you're working with a cable net and you apply a force to it, it's obviously changing dimension, and the distance putting the glass pieces in is increasing, right?

I mean, as you distort the net, the glass pieces are moving away from each other, and that simply means that if you have a cable basically holding the glass, the glass wants to pull away from the cable and you need to have a way to hold the glass in there, so it's allowed the glass to slide out. But then when the force is applied, it slides out, and then when the force is gone, it comes back into position. So that's how that wall is designed, actually. So the whole wall can move and then it comes back to its original position.

MS. LAURIA: So as James Carpenter Design Associates, you have to be totally inclusive.

MR. CARPENTER: And that is a patentable thing, and the company that built it, actually, did patent it, even though we developed it here with [?] DuPont, you know, together. So it's sort of a - and it's now being used by a lot of different, you know, government agencies for -

MS. LAURIA: So in 1972, when you were out blowing glass in the wilderness of Stanley, did you think -

MR. CARPENTER: And Pilchuck, right. [Laughs.]

MS. LAURIA: - did you think that you'd be dealing with - [laughs.]

MR. CARPENTER: No, hardly. No, hardly. That was good fun back then.

MS. LAURIA: [Laughs.]

MR. CARPENTER: But we'd like to -

MS. LAURIA: This will be the end of disc two.

[END MD 02.]

MS. LAURIA: Disc number three, interview with James Carpenter at James Carpenter Design Studio, New York City, February 25, [2008,] Monday.

MR. CARPENTER: We're here. How was the fresh air? You get some fresh air?

MS. LAURIA: It was great, actually.

MR. CARPENTER: I'm afraid I didn't get any. I was just -

MS. LAURIA: [Laughs] You got landlocked.

MR. CARPENTER: - on the telephone. Yeah, exactly, most of it. Okay.

So we'll do about an hour, is that about right?

MS. LAURIA: Yep. Yep.

MR. CARPENTER: Okay, okay.

MS. LAURIA: And then I think we will do the dutiful thing and I will ask you some of the questions.

MR. CARPENTER: Okay, well, I wasn't sure if we had touched on some of these things or not.

MS. LAURIA: No, we haven't, and I think it would be good to do that.

MR. CARPENTER: Maybe John [identify?] can answer some of these questions, right?

[They laugh.]

MS. LAURIA: Have you had any involvement with any of the major craft centers? And I know that you've underlined Haystack Mountain School of Crafts [Deer Isle, ME] and Pilchuck Glass School [Stanwood, WA], and do you find that those experiences have enriched you as an artist?

MR. CARPENTER: Oh, well, I think actually Dale and I went up to Haystack very early, like probably '68 or '69. We went up to Haystack and taught there one - he took me along as sort of his assistant teaching there, and I think those environments and also knowing, you know, Fran Merritt and Priscilla Merritt, who were obviously these incredible people, who had, sort of, really nurtured Haystack from day one. I think being around that environment was terrific. I mean, we did some of the very early pieces, I would, in nature. But some of these simple blown-glass pieces, floating them in the ocean and doing some things out in the woods in Maine, which were eventually pieces that Dale continued, doing some of those more environmental-type things later.

But certainly that opportunity was a great influence, also, on getting Pilchuck going, basically. I mean, Pilchuck was, for the most part, inspired by Haystack and that Dale really wanted to set up some sort of summer program that was exclusively for glass, you know, out in the country. And then the [Anne Gould and John] Hauberg family, you know, made the land available. And after the first year or two, which were funded through, sort of, these independent colleges of art grants that we'd gotten, then eventually some of the local people and the Hauberg began to fund it in a much more significant way.

But I think all of those environments - because I think the interesting thing about Pilchuck is it wasn't, in the first few years, really focused on craft so much as it was - it was - Buster Simpson was there as a sculptor. There were some architects there; there were some other sculptors there, a couple of film people. So it was more like just trying to bring people together who shared this interests - terms of, maybe, in an environmental situation, and glass was certainly part of it, but it wasn't overtly the only thing that was going on there.

MS. LAURIA: Which is strange because now, you know, 25 years, 30 years later -

MR. CARPENTER: Right, right, right. It's become sort of the glass -

MS. LAURIA: - Pilchuck is very focused.

MR. CARPENTER: - the glass place, yeah. And I think also what was interesting about Pilchuck is that we were all sort of thrown out into that environment, and then we all sort of built our own little places to stay. So built a - basically this whole glass house for myself, made out of all recycled windows, which was certainly one of the first built projects that I did. So that was very much influential, yeah.

MS. LAURIA: Is that in Tina Oldknow's book on Pilchuck [Pilchuck: A Glass School. Seattle: Pilchuck Glass School in association with University of Washington Press, 1996], your up -

MR. CARPENTER: I'm sure there's a photograph in there of it, yeah, yeah. So I built that and -

MS. LAURIA: I've toured that campus and I know Flora and Joey - Flora Mace and Joey Kirkpatrick showed me

their tree-house that they built at one point.

MR. CARPENTER: Yes, right, the first one, right, right. And then Buster had a little tree-house thing, and Dale had a place up near where I was; we're sort of up on the hill overlooking it. And anyway, that was always a great experience to get that going, and it's obviously very sort of communal undertaking at the very beginning. So I think that was quite idealized relative to a community creating things. So those were very influential, I think, in terms of getting things going.

MS. LAURIA: Have you had the desire to go back and maybe teach at Pilchuck, because I get their - you know, their regular schedule.

MR. CARPENTER: Oh, do you? Yeah, no, I've never - not so much to teach. I've gone back once or twice to give a lecture, but I haven't gone back to teach.

MS. LAURIA: Because I think it could be enriching for students to learn about your perceptual concepts and how they apply to glass.

MR. CARPENTER: Well, no, quite true. I guess when I go and talk, I usually do talk about that. I did teach a course at Haystack about - probably about 10 years ago - which was just more on environmental installations using glass and light. So it was a group of six or eight glass students, but they were all charged with having to, sort of, conceptualize an idea and then be able to execute it. I mean, the landscape, basically. So I was trying to get them away from the whole glassblowing routine that dominates everything.

MS. LAURIA: But you mentioned that working in conjunction with - well, not in conjunction necessarily - but Andy Goldsworthy had done the landscaping around the Battery Park Buildings.

MR. CARPENTER: Mm-hmm. [Affirmative.]

MS. LAURIA: Can you talk about maybe some other environmental installation, outdoor installation artist that you admire? I mean, is Spiral Jetty [Rozel Point, Utah, 1966] on your radar or -

MR. CARPENTER: Well, yeah, Robert Smithson was probably the most influential, maybe not explicitly the Spiral Jetty, but I think some of the earlier work, actually, that dealt with, you know, sort of the mirror landscape. The Mirror Travels series [1968-69] were very influential, you know, and that was sort of - a lot of those are almost concurrent when I was doing some of those film projects and some of those things.

MS. LAURIA: And Ana Mendieta?

MR. CARPENTER: Yeah, yeah, but more like Smithson. I think Smithson was one of the major people and -

MS. LAURIA: Much more of a minimalist.

MR. CARPENTER: And then some of the work by Dennis Oppenheim - early work by Dennis, which was a little more - not so much in the middle minimal end of it but just on the sort of conceptual end of it - were always pretty intriguing. But Smithson, yeah, he did a couple, like, these beautiful glass bridges and stuff that were obviously just like a spur-of-the-moment-type thing that he did. But the way it was photographed and then, sort of, described, he's very, very good at doing that. So -

MS. LAURIA: And were you involved as James Carpenter Design in the glass bridge that goes to the new glass museum? It says "Courthouse" on your project list in your resume. I wasn't sure where that was.

MR. CARPENTER: In Tacoma - no, not in Tacoma. We did a glass bridge in Seattle [Blue Glass Passage, 2001-03], actually, for -

MS. LAURIA: Oh, in Seattle.

MR. CARPENTER: - the new city hall. Actually, it joins the office tower, which houses all the administrative offices for the city, and it links it to the city council chamber that basically goes across a large atrium space.

MS. LAURIA: And what was your idea in doing that, besides the obvious, which is, you're using glass to span water?

MR. CARPENTER: Well, it sort of - I think conceptually it had to do with you entered the building, sort of, you know, as Seattle's quite topography and Seattle's quite aggressive in the sense of, like, the hill structure there. And the courthouse, or the city hall, you actually enter on one higher elevation. And then you walk into this atrium space and basically there's a big grand stairway that drops all the way down two streets, sort of cuts all the way down, and this bridge, basically, comes across at eye level. When you enter it, it's almost like at eye

level, and the whole idea was that the glass on the bridge is blue and, sort of, this very deep blue glass. And when you looked over at the bridge, you're looking down at Puget Sound at a distance. So the whole idea was you're almost like extracting or transposing -

MS. LAURIA: The water.

MR. CARPENTER: - a piece of Puget Sound up into the courthouse.

MS. LAURIA: I'm trying to find it. I don't know where it is in the book. I know I read it.

MR. CARPENTER: Yeah, so that was really - you know, it was about that idea, and then it was also not making the bridge. The bridge is really meant to be a place which certainly connects those two things together, that sort of little office tower with the council chambers, but it's wide enough. And then it's designed - on the one side facing Puget Sound is a very beautiful wood handrail, so it's actually a place where people would gather and meet and talk. So the bridge is really more about establishing a place to encourage that sort of interaction rather than -

MS. LAURIA: So it's a bench in the sky. [Laughs.]

MR. CARPENTER: - in the rooms. Sort of a bench - yes, a bench in the sky. That type of -

MS. LAURIA: It's a floating bench. [Laughs.]

MR. CARPENTER: But it's large enough that you could have, you know, seven or eight people abreast, you know, walking across it. So -

MS. LAURIA: And did you encounter any unique structural problems that you had to overcome?

MR. CARPENTER: Well, no, it's quite complex, actually, structurally. The glass is used as the structural stiffener. There's actually a glass handrail that's used as the truss work. The glass is actually stiffening the whole bridge and the handrail and then the glass - you know, when I was saying a lot of the work we've done has influenced other things, like the Apple Stores, over the years, the whole detailing of that type of a bridge uses these - uses very, sort of, complex laminations, and this is actually a little chunk of the bridge that actually just shows that the bridge itself is made up of these four layers of glass, and then, in fact, laminated into the glass itself is the aluminum structure, which is part of this little sheer plate that holds the glass in place.

But this was a whole process of using these types of lamination materials, which were new materials made by DuPont back when this was done 10 years ago. These were all, like, very new technologies that we developed with a company over here in Long Island City that we've worked with for 20 years. But this is basically exactly what's used on the Apple stairs [Stores?] now. They insert the fittings, you know, into the glass and laminate them in.

MS. LAURIA: And this reminds me of the - although I have not walked across your bridge, I have walked across Sir Norman Foster's bridge in London -

MR. CARPENTER: Oh, in London, yeah.

MS. LAURIA: - that goes over to the Tate, and it was a wonderful feeling, actually, to be suspended on what the mind perceives as an invisible structure, even though you know it's very solid.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: But it gives a tremendous sensation of being sort of sandwiched in, with space around you.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And I thought I would be dizzy, you know, because I -

MR. CARPENTER: Because of that, right, yes. Well, the trick there was - I think it's a - it is a suspension bridge, but they've lowered the points of suspension to the point that they're almost at eye level when you walk along it. So the suspension cable is very, very shallow arc, and by making such a shallow arc it's actually, very fortunately, very inefficient and very unstable. That's why when they first built the bridge, it had a - got a lot of structural problems with it, yeah.

So on the one hand, it creates, like, a very - what you'd say is a very exciting environment, in the sense that you sort of sense that there's something quite unusual about how it's structured.

MS. LAURIA: [Laughs.]

MR. CARPENTER: But it also then generated - which is sort of interesting - this is always interesting because out of something that is pushing an idea into an area that doesn't really want to go, structurally, they then came up with some solutions that are quite interesting, because they have - they kept that very low structure and it was very unstable. I think you knew that when they built it, and then they added underneath it these devices that actually - they're basic hydraulic devices which counteract. When the force is applied over here, the hydraulic system will apply a balancing force over here.

MS. LAURIA: So the counterforce.

MR. CARPENTER: So it's really - it enters into an area of, sort of, a very fascinating field of structures, which is dynamic structures, which are structures that are self-corrected. So it's a whole other field a lot of people are quite interested in.

MS. LAURIA: And I - when I was reading your book of projects - I think this is what I'm looking at over here.

MR. CARPENTER: Yeah, that's the little model of it, right.

MS. LAURIA: And I thought this was probably - well, for what I know of you and your design associates from this booklet, which I think is what, nine projects?

MR. CARPENTER: Right. Yeah, I don't know how many are in there. Right, right, right.

MS. LAURIA: That this seemed veering off in a different direction. First of all, the perforations were very defined and very hard-edged, and then the ocular system seemed really, and scientifically embedded -

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: - which is - in your other projects, it was much more -

MR. CARPENTER: It was much more, yeah, sort of -

MS. LAURIA: - substrata.

MR. CARPENTER: - sublimated. Yeah, exactly, exactly.

MS. LAURIA: So do you want to talk about - is this a new -

MR. CARPENTER: Well, this is actually - this is a project we did with Grimshaw and Partners, and it's for the Metropolitan Transit Authority [2008- ?] here in New York.

MS. LAURIA: Mm-hmm. [Affirmative.]

MR. CARPENTER: And it's on Broadway, actually right down by the World Trade Center, in fact, the Calatrava Station. The World Trade Center is at one end of what's called Day Street, and just at the opposite end, on Day Street, is this transit center. I mean, this transit center is basically an attempt to create a Grand Central-like focal point for basically the interchange between different subway lines downtown. Like our subway lines all run north-south, and then there's a few places where you can connect east-west to get to different lines.

So downtown, this is meant to be the place where you could get between the different train lines. And it's in a neighborhood that is both historic buildings and some taller buildings. It did not have a lot of access to sunlight or daylight in that area, but the hope was that we might introduce - or at least the way we got into the project - that we might introduce daylight into the subway system as a way of way - finding, basically, allowing more daylight to get down into the subway stations so people could basically orient themselves better when you're moving through this whole sort of confusing environment. And it's very confusing down here, because each subway line is built at a different time by a different owner, and the passageway goes below the tracks sometimes, above the tracks sometimes, and you're sort of like going up and down as you're trying to move east/west.

So all the subway entries from the street down were all to be, sort of, covered with these glass structures that let light down into the subway, and then this one main space is covered by, basically, a translucent glass shell that has this metal reflector system floating inside it. And the purpose of the metal reflector system is to redirect the sunlight down. So as the sunlight comes through this, the curvature is, in fact, all designed, actually, as a huge optical system. So it takes the sunlight and then bounces it down to the subway tracks below. So as the sun moves over during the day, that, in fact, is the optimum shape to maximize the amount of light to go down.

MS. LAURIA: It's like the shape of the back of the eye, isn't it?

MR. CARPENTER: Yeah, and then if you look at it, I mean, it's not dissimilar to, like, some lighting things you would have seen out of 1920s or something, if you thought about these, like, gold-enameled green shades or something like that.

MS. LAURIA: Mm-hmm. [Affirmative.]

MR. CARPENTER: There's actually a shape. It's sort of like the optimum shape for redirecting light. And then inside it, we wanted to allow you to almost read the light as if it was a - almost like it was a sundial. So there's different finishes on the metal panels inside, different levels of perforation. The perforations are actually used for drawing smoke if there was a fire in the subway. You pull the smoke through the metal screen with the fans -

MS. LAURIA: And out.

MR. CARPENTER: - out, so it had to permeable that way. And then we varied the density of the perforations seasonally, basically. There's these arc - where the sun would - that's what this is described as, a sun arc that would be, say, how the sun moves by in the 21st of June or moves by on the, you know, the 21st of September, and those zones are actually different finishes on the metal and slightly different levels of perforation. So you'd actually - if you're in the station and you actually saw the sun coming in, and then hitting one of those materials' edges, you would know - basically, you could almost read what time of the year it was.

MS. LAURIA: [Laughs.]

MR. CARPENTER: You could read what day it is and what time of day it is -

MS. LAURIA: Time of year.

MR. CARPENTER: - and what time of the year it is. So -

MS. LAURIA: And did you collaborate with somebody to come to that understanding?

MR. CARPENTER: Well, this was - yeah, well, Grimshaw were the architects, and then Arups, of Arup and Partners, now called Arups, a big engineering firm, were in charge of all the civil engineering, and they have a daylighting group in their company at work on this.

MS. LAURIA: A daylighting group.

MR. CARPENTER: Daylighting group, yeah, and then I have a partner -

MS. LAURIA: I didn't know there was such a group.

MR. CARPENTER: - yeah, and I have a partner here in another little business that we do, which is just about daylighting. So we do a lot of work just for clients, just on analyzing daylighting in buildings, which is almost a subset of the other stuff I do here. So -

MS. LAURIA: Oh, that is a whole new category.

MR. CARPENTER: So it was really - it was sort of an outgrowth of, you know, all the work I was doing. As we've been talking, it's always been about revealing properties of light in a more aesthetic way, but a parcel of that is understanding - I mean -

MS. LAURIA: The passage of time.

MR. CARPENTER: - I mean the physics of light. Yeah, the whole thing. About how it - and not just the passage of light but how you can calculate and analyze and tell somebody, you know, you're going to have exactly that much daylight on such and such a day of the year, and that's enough light to allow people to see without artificial sources or all that type of thing. So we have a lot of pretty strong, analytical capabilities in the office to do that.

MS. LAURIA: So I don't know if you've ever been asked this, but how do you define yourself? I know you call yourself a designer, but you're - would you then add to that designer, artist, scientist, optician?

MR. CARPENTER: I usually - I actually - I usually define myself as a sculptor.

MS. LAURIA: You do? Okay.

MR. CARPENTER: Right, right. No, I usually just always say I'm a sculptor.

MS. LAURIA: Interesting, because most sculptors I know don't know much about daylighting.

MR. CARPENTER: So anyway, the reason I just, sort of, say that is because I relate to sculpture more, to conceptual background, and, sort of, an understanding of materials and an understanding of people's experiences in place - control of people's experiences in place. So I always describe myself as a sculptor.

MS. LAURIA: Well, Frank Gehry does that, too, I believe.

MR. CARPENTER: Does he really? Yeah.

MS. LAURIA: Yeah, and if he - if someone asks him to submit a drawing of his buildings - I'm sure you've seen them.

MR. CARPENTER: Yeah.

MS. LAURIA: They are -

MR. CARPENTER: He does these little sketches or collages or something

MS. LAURIA: Yes, they're very gestural.

MR. CARPENTER: Yeah, yeah, exactly, exactly.

MS. LAURIA: And I think he avoids - he never does his own models. He hires people to do all of that, because he feels like all the energy is lost in the translation -

MR. CARPENTER: Yeah, is in the original -

MS. LAURIA: Right.

MR. CARPENTER: Right, right, right.

MS. LAURIA: Of the brain to the hand in those sketches.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: So why -

MR. CARPENTER: So I probably take it as a sculptor in a more - you know, almost in a much earlier - actually, both a very contemporary idea of sculpture being sort of involved with environmental issues and conceptual issues and all that, as well as maybe an even more -

MS. LAURIA: - formalistic line, volume.

MR. CARPENTER: They're almost more historic, in the sense that sculptors were the architects at one time, basically.

MS. LAURIA: [Filippo] Brunelleschi was this type of sculptor/architect, wasn't he?

MR. CARPENTER: Yeah, or any of those people. I mean, at the moment there was not a profession of architecture, basically, you know, until the late 19th century, really.

MS. LAURIA: That's true. Yeah, well, the late 19th century loved categories. They loved to put little insects under tee-pins.

MR. CARPENTER: Yeah, exactly, exactly. Well, that's when all these professions - that's when all these things became sort of, you know, codified. Yeah, exactly right.

MS. LAURIA: Does religion or a sense of spirituality play a role in your art, and if so, why? I mean, I know it does, but I'll let you explain it.

MR. CARPENTER: No, I just - as we were talking about earlier, I think there is this whole idea of making people more aware of the potency of nature in our day-to-day lives, and if that's considered to be spiritual, then, yes, I'm very involved in trying to awaken or at least make people more aware of that. So it's a -

MS. LAURIA: But there is a history of light and luminosity being associated with the greater creator.

MR. CARPENTER: Absolutely, absolutely.

MS. LAURIA: You know, all the way through halos and through the light coming from the sky and the Giorgio



painting.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: I mean, is that something that -

MR. CARPENTER: So it's all - yeah, I consider that part and parcel of the work and why that is. So -

MS. LAURIA: But it's less - I think -

MR. CARPENTER: Less overt, I think.

MS. LAURIA: Right, less overt in your work and much more diffused. [They laugh.] What do you see as the place of universities in the American craft, design, or architectural movement and specifically for artists working in areas such as the areas that you work in?

MR. CARPENTER: Yes, well, I just sort of relate that more to my own experience, as we talked about earlier, where there was an opportunity in the school environment to explore a material and explore many materials, actually, in a less structured way, I think, that allowed for a lot of experimentation and, sort of, innovation. And that, I think, in many ways - I don't know if that was unique to that particular time and that particular place - but it certainly is influenced how I approach working in general today, and that whole idea of having the opportunity to explore many different categories of materials and sort of invent things or explore different things in a very open way as opposed to a much more didactic or, sort of, proven sort of progressive way of studying. I think the way we have had an opportunity back then to open things up a lot more, and I don't know if it's become more packed in these days or not, but -

MS. LAURIA: Well, I think the time frame that you're dealing with when you were in school was more or less a flashpoint.

MR. CARPENTER: Right, right, right.

MS. LAURIA: It was the beginning of so many forces coming together to establish a very exciting new field, which you have, I think, totally sort of jumped over in a way. I mean, you didn't stop in studio glass, and there's nothing wrong with stopping there.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: It's just that wasn't your objective, but you were able to take from that experience and go to this place.

MR. CARPENTER: Right, right, to build on that. Right, right.

MS. LAURIA: But do you think that people - that it's possible for people - I guess what they're getting at here, is do you think that artists can be - almost like outsider artists can be just as visually effective without training, or not?

MR. CARPENTER: Oh, yeah, yeah, yeah, yeah, definitely, definitely. I would definitely say so, and I mean, there's obviously a downside to the training, too, right, because the training can almost -

MS. LAURIA: Close you in?

MR. CARPENTER: Yeah, shut it down. Shut down the opportunities of exploring something or not even awaken the interest of exploration. There's an outsider that is obviously generating something from a position of motivation that is typically pretty individualized, and then oftentimes very unique. So that - to find that sort of individuality is hard, and in any sort of exercise. And I think that's - I think sometimes that, you know, the more we think about the craft world, I think there's oftentimes an effort for people to try to find this, sort of, so-called voice or sort of style or individuality.

MS. LAURIA: Yes, and now they call it "authentic."

MR. CARPENTER: And it may or may not be a particularly personal exploration as much as it may have been more driven by -

MS. LAURIA: An institutional -

MR. CARPENTER: - the function - yeah, to find what's your - you know, it may not be as openly or as actively explored and, sort of, honest relative to your actual beliefs or thinking.

MS. LAURIA: Would you say that your art has a visceral quality to it? And tactile; I mean, those are terms also applied to sculpture.

MR. CARPENTER: Well, it certainly has tactility to it, yeah, and visceral in the sense of -

MS. LAURIA: You experience it.

MR. CARPENTER: - reacting - yeah, yeah, yeah. Well, I think it can. I think there's people who have certainly reacted to some of our things very -

MS. LAURIA: Viscerally?

MR. CARPENTER: - well, very - you know, very positively but also, like, very powerfully, yeah, and that they get to feel something, or something has happened to them, right, so it's -

MS. LAURIA: Which one of your commission works up to this date would you say - not to make you pinpoint any one in particular, but one that really realizes your vision most fully? That you were able to bring to the table something that you really wanted to do; it was a challenge for James Carpenter Design as well as it was a contribution to the urban environment.

MR. CARPENTER: Right, right.

MS. LAURIA: Which project should we look at to see that sense of fulfillment?

MR. CARPENTER: Well, I think there's two, and we've talked about them, actually, but there's two that I see as being quite important, and they are in some respects, the opposites of each other. And the one is the chapel project with Ed Barns, which is quite early on, and that I always look to as being one of the most successful levels of collaboration, where the work is seamlessly integrated with the architecture. And what was created is not so much something that you look at in and of itself, but what you're made aware of is really the effect that it has upon your experience of the room that you're in and thereby, hopefully, opening up some questioning about what this aperture is doing relative to interpreting qualities that exist outside and bringing the inside of the building.

So one is about, sort of, a success of a collaboration, and it's very much about controlling, sort of, an internal space, a space that's interior - a sort of interior space, and you're earnest of the power of that interior space as affected by the exterior. And then the other, I guess, would be, like, say, Tower Seven, which is like a completely different scale, but it's, nonetheless, operating with many of the same principles, but it's totally externalized. I mean, you're - you'd asked earlier about what does somebody's reaction of being in the building is like? Well, to be in the building, to be honest with you, you're just in a very beautiful glass, day-lit space. It's a very wonderful work environment, but there was never the intent that it would be anything other than just a great workspace. We're not trying to do any sort of light effects or make people more aware of the lighting conditions within the building other than to have this beautiful view out - an unobstructive view out over the landscape, but it really reacts more to the exterior and the public viewing the object.

So one is sort of like you're in the space and, basically, the information is being brought in to you, and then the other is you're actually observing it, observing this object, and, sort of, how it changes and reinterprets qualities of the ambient lighting qualities that exist in that environment, you know, and that's sort of - you move around the building, it totally changes from side to side as you go around it. So they're sort of opposites of each other in that regard, but I think they're holding onto quite similar principles relative to reawakening people's experience of light.

MS. LAURIA: And some of the qualities that you're trying to address in your building environments, one could think that all of this could be done cinematically by having projectors, as I know you are using in the Battery Park walkway - there is a proposal - and I apologize for not remembering the person's name - but one of the big developers of Los Angeles wants to do these tall buildings that then become the surface for advertisements, you know, for filmic things.

MR. CARPENTER: Okay, right, right, to project against.

MS. LAURIA: Right, and you could have the environment outside be projected onto the skin of the building. But that would then be too overt for you or too, maybe, manipulative.

MR. CARPENTER: Yeah, I think in all the things we've ever done - going right back to the salmon migration - it's literally taking -

MS. LAURIA: What's already there.

MR. CARPENTER: - it's taking something and not changing the time, and you're not trying to turn something into something that it isn't. I mean, in the case of a building like Tower Seven, you're basically just looking at the light that would be hitting any surface at that location, and what you're trying to do is create something with the configuration of the overall building that creates some sort of very remarkable qualities that you would otherwise not observe. I mean, to come up with a projection sort of means that there is a particular moment in time that is being captured, I guess, and being re-presented.

MS. LAURIA: Mm-hmm. [Affirmative.]

MR. CARPENTER: Although it could be real-time projection, like the thing down at the museum, which is just - it's never ending. It's just sort of an ongoing live-feed video camera. I mean, you could do some things like that. How effective they are on the exterior, I'm not sure. It's certainly something to be thought about.

MS. LAURIA: But it's also more controlling of what the person's actually experiencing, I think -

MR. CARPENTER: Right, right, right.

MS. LAURIA: - than when you did the walkway. I mean, I was taken aback when you said it's not - the projection is not on the highest point of the water. It's on the point adjacent -

MR. CARPENTER: Or the brightest point.

MS. LAURIA: - the brightest point. It was on the one adjacent to it, which would mean that it was always going to be at a very high threshold if you used the highest point of light, which I think would maybe be too-amplified information for people.

MR. CARPENTER: No, exactly, exactly, exactly.

MS. LAURIA: So it would not be calming. It would -

MR. CARPENTER: And you lose - yeah, you lose the, sort of, richness of light and shadow, basically.

MS. LAURIA: Right. So you're more after the gradient experience -

MR. CARPENTER: Right, right, right.

MS. LAURIA: - not so much the highest, most extreme.

MR. CARPENTER: Just the blast, right, right, right.

MS. LAURIA: Where do you get your ideas for your work, and how have your sources of inspiration changed over the years? I think you've answered a lot of that, but if you want - I would like to know why - I mean, I know your background is in crafts and glass, but why glass and not something else? It could be Plexiglas. I mean, it could be acrylic. It could be a reflective metal like titanium. What is it - does it have to be glass, or do you see, maybe, glass morphing into something else?

MR. CARPENTER: Well, I tried to explain that a little earlier, that I think glass, for me, is actually unlike other materials in the sense that it is completely synthetic. I mean, there is, you know, volcanic glass. I mean, obsidian, and then there's also these things called fulgurites, which are created by lightning. It's glass created by lightning. But other than that, I mean, glass is a totally synthetic thing, and it's - in that regard, as I said earlier, there are literally millions of types of glass.

I actually look at glass as almost being more of a chameleon. It's a material that can always change itself; it can take on different functions, different capacities. It really has the ability to almost - whatever idea you want to impose on it, it can somehow modify itself or adapt to it and then reveal it or manifest it, and in that sense, I really see it as an incredibly mutable, you know, in that regard. And even though I tend to use it in, oftentimes a very static way or just a particular coating or particular quality of reflectivity or diffusion, you know, it has this whole range of other properties that I always, in the back of my mind, sort of - when I think of glass, I think of it in this much more broader sense, actually, and when I think of other materials, I don't quite give them that same breadth of potential.

MS. LAURIA: So you wouldn't think of - for structural reasons - for whatever. I mean, I know that acrylic can be much lighter than glass -

MR. CARPENTER: Right, right.

MS. LAURIA: - but it is refractive but not reflective. Is that true?

MR. CARPENTER: Reflective, and then it's - you know, it's not a particularly durable material in the long term, anyway. I mean, it's -

MS. LAURIA: But it's synthetic, not an organic material, because, unlike glass, it's not made of natural substance.

MR. CARPENTER: It is synthetic, but it has less - yeah, permits, I guess. That's one of the - I'm actually - all the work I do - and this is one reason I've always - again, when I moved away from doing films to trying to do these other works and trying to do works that are basically permanent, right? I mean, they're there and you don't really have to do anything to them, but they have a dynamic and an angulation and, sort of, an engagement to them, but they're really fixed things.

MS. LAURIA: Well, I thought that was really interesting in your proposal that you show this one building with a window washer on the skin of the building, because that one project seemed like it would be a very difficult thing to maintain - [laughs] - with those jetting out fins.

MR. CARPENTER: Right, right, right, right.

MS. LAURIA: But I'm sure you solved this in some manner.

MR. CARPENTER: Yeah, I was actually - that's the project that's up on Columbus Avenue here and it's actually photographed during the installation. The guy - they're actually installing it, and that's actually a very - you know, it's quite an old project but it's -

MS. LAURIA: It's the dichroic light field and -

MR. CARPENTER: Dichroic light field, which is near, just above Lincoln Center and it's a very simple idea because it's the base of a building; it's quite a tall tower. And then the lower podium, basically, of the building, was all masonry. It was all brick and a whole city block long, 90 feet high, solid brick. It had a couple storefronts in it, but that was it. And the community, actually, when the developer was developing the building, sort of got up in arms. And as, you know, part and parcel of their community board approval, they had to sponsor a competition to have an artist do something on the building, and then we ultimately, sort of, prevailed at the competition.

But the idea here was that the background of the wall is actually made up of two different types of glass, one which is reflective and then one that comes off of a solar collector. It's actually a very finely prismatic surface. And what it does, basically - it's just about a half-inch-thick piece of glass, but it's mounted. The whole project had to be done within the thickness of a brick. The bricks were removed, and there's just a concrete block wall behind it, so we just created a skin of this glass. And what it does, basically, without having any illumination, it basically just takes ambient sky brightness, or any sort of ambient brightness in the environment, and goes to the prismatic surface on their mirror. The light basically is gathered and goes back through the glass, gives the reflective surface that comes back out again.

And because the light is being, sort of, scattered within the glass, the wall actually becomes somewhat self-luminous. I mean, it sort of looks like this luminous surface, and then extending perpendicularly off of that are these glass fins. So you've got the glass wall in one plane, and then the fins are coming off 180 degrees to that or 90 degrees to that. And as you can sort of see in this one photograph, from many vantage points it looks as if the fin is, in fact, going back into another space behind the wall. So it's, how do you take a completely opaque, shallow wall and -

MS. LAURIA: And give it depth.

MR. CARPENTER: - on the one hand, generate sort of the illusion that there's a volume of light or there's some sort of a space back there and there's something coming out of it. But also in this wall, what's of interest about it, like, you can look at this wall from two different directions at the exact same time. Like if we look at this wall - I think it may be a little better illustrated in that book - but what's true about all of these projects and what you can never quite explain in photographs because they are so -

MS. LAURIA: I'm staying right by Lincoln Center; I've got to walk by this building tonight when I go home.

MR. CARPENTER: Yeah, well, at nighttime, it's a little darker, but they used to light it. It's not lit at the moment. But -

MS. LAURIA: There it is.

MR. CARPENTER: I was going to see if there is - I thought there was a photograph. Yes, here it is.

MS. LAURIA: But do they -

MR. CARPENTER: So this is actually a perfect example. Like these two photographs are shot at the exact same time. So -

MS. LAURIA: But from different directions?

MR. CARPENTER: Yeah, so if somebody was looking from the north looking to the south, you see this, basically. And then as you walk by it, it obviously goes through a whole sequence of changes, and then if you were standing to the south looking to the north, you see this. So two people that look at it - any two people looking at it, even from five feet apart from each other, they see something totally different and, basically, that idea that the whole thing changes as you go by - this is not unique. Every single one of these projects does this. This just happens to be probably the most clearly -

MS. LAURIA: Obvious.

MR. CARPENTER - obvious about how it happens, and then the other types of things, once you've, sort of, created that type of background surface, which is obviously very responsive to light, it can take very simple moments of happenstance that occur in this city. Like, this is light - the sun now has already moved behind the building. The sun is probably hitting buildings four or five blocks away, and there are small reflections coming back from windows of that adjacentability. I mean, we see this all the time in the city, where you have light hitting brick walls or something, and it's not particularly remarkable. But as soon as you establish a field that is this responsive, all of a sudden those moments of happenstance of light all of a sudden create something quite remarkable. So people sort of see that, and I've had calls from people who have been up here in the middle of huge thunderstorm and the sun sort of comes out and somehow this thing, against a totally black sky, all of a sudden sort of lights up and they just sort of say, well, you know-

MS. LAURIA: It's so hectic.

MR. CARPENTER: - I don't know you and I don't know anything about your work, but I just wanted to tell you I saw this and just sort of - and somehow they got our name. I don't even know how they get our name, but they -

MS. LAURIA: That's great. Well, are there any maintenance or other issues?

MR. CARPENTER: Very little on this thing. Well, they never cleaned us for about eight or 10 years to begin with, and then when they first cleaned it, after all those years, they took some additional effort, and then since then, they've kept up on cleaning it. But I'd say, you know, we've been very fortunate, you know, like on all of our projects. We've never really had a problem on any project.

MS. LAURIA: Speaking from a pure homeowner's point of view, a lot of these things would be great if they could be adapted to single residences and also the idea that whatever interventions - for me, these seem like interventions on a structure -

MR. CARPENTER: Yeah, yeah, exactly, exactly.

MS. LAURIA: - but they could be turned inward. I mean, if you had a window plane that you could -

MR. CARPENTER: Right, right, right. No, no, exactly, exactly, exactly.

MS. LAURIA: - reverse it or, you know, open it up and do the same inside the house or open it at all. I mean, do any of your glass skins open?

MR. CARPENTER: Yeah, we're doing a few things - no, not quite the way you're saying, but, I mean, you're quite right. You could actually invert a lot of these things and have them be experienced more.

MS. LAURIA: I think it's unfair that the urban environment should have all of this fun!

MR. CARPENTER: [Laughs] But we're doing a couple of projects right now, and I think there's another - I don't know if it's in this book or not. But we've done some of these other - we're doing a project down in - two projects here in New York City, where they are houses, townhouses.

MS. LAURIA: Mm-hmm. [Affirmative.]

MR. CARPENTER: Basically, you know, a standard New York house, which is on a 100-foot-deep lot by 25 or 30 feet wide. The house is typically built -

MS. LAURIA: They're narrow; tall and narrow.

MR. CARPENTER: - and the house is typically only 60 feet long. We're actually redoing the whole building and

then adding a brand new, six-story, all-glass addition on the north side on one case and on a south side in another case. So we're actually adding a whole extra room on the house that goes up the full height of the house, which will be all about light. So we're basically taking it, bringing the light down, creating this all-new glass environment at the back of the building, and it all, sort of, spills light into each of the floors.

MS. LAURIA: So you have to open up the back of the building then to -

MR. CARPENTER: It's all going to be completely - I'm just tearing the whole back of the building off and putting all new glass.

MR. LAURIA: So that can be adapted to already -

MR. CARPENTER: Absolutely, yeah, absolutely, absolutely.

MS. LAURIA: - you know, structures that have been built, and they may even be old and have old materials.

MR. CARPENTER: Absolutely, right, right, right. One example - I thought it was in that book, but it's in here. One example of that is a - this is in a more - well, this is actually a problem. This is a building down in Washington, D.C., where they built this new building, which is about 10 or 12 stories high, and they had a skylight on the top of the building, which was about eight feet wide and about 60 feet long, over a 130-foot-deep courtyard, and they realized when they built this, there's absolutely no light coming in.

MS. LAURIA: From that skylight?

MR. CARPENTER: Yeah and all these people were looking into this -

MS. LAURIA: [Laughs.]

MR. CARPENTER: - supposedly lit courtyard, and they're basically looking, like, in a closet. There's, like, no light at all in this thing.

MS. LAURIA: Because of the way that the building is orientated, the light can't filter down?

MR. CARPENTER: The way the building is - the way it's oriented, and it was so narrow, too, like you might have a moment, like, when you had light coming in there and the rest of the day it's all gone.

MS. LAURIA: It's like an alleyway.

MR. CARPENTER: It might come down like 10 feet or something or 20 feet. It's not going to go down 130 feet. So we basically designed this device which - and this is actually a very good point to be made - we designed this piece, which is 130 feet long, and it uses one of these systems on the roof, which is called a heliostat, again - a small one. So it gathers the sun, projects the sun over, and then the sunlight is beamed, basically, down through the center of this cylinder, which is made out of prismatic glass and fabric.

But basically, you're able to light this whole 13-story courtyard, plus illuminate this lobby, and bring direct sunlight down onto the base of the building. So all of the light from that very top, all the way down, down to here, basically, is all the light coming off this one mirror, which is no bigger than a typical window on a building. So if you just imagine the typical window, that's all the sunlight we're using to actually light this whole thing.

So it gives you an idea of, like, how potent it is or how strong it is or how you could do something, say, on a residential level, with very strategic little inserts. You could completely transform how people experience the light inside of the building. And this is what I meant earlier about there's so many possibilities for things like this in New York City, particularly any urban environment, I mean, where you could really just completely change the way people experience their living environments.

MS. LAURIA: So, in the future, can you foresee maybe - or maybe I'll hopefully foresee - that there might be some funding again for this, the common good, where they would hire people with your experience to just start thinking these things through before they actually lay the footprints down on certain buildings. I imagine that your service is -

MR. CARPENTER: Well, we're doing some of this. My partner, David Norris, in this daylighting business, we're now working with the city of Toronto for a new residential development that they're doing on the lake in Toronto. And we're doing all the analytical work for the layout of the streets and then the codes, basically, for those buildings' structures. I mean, like what are the shapes of the buildings permitted to allow for maximum daylight in all the residential units? So there is the opportunity, yes, to do individual buildings, certainly, but then there's also the opportunity of influencing how zoning is done, which makes things more - which doesn't mean you're building less stuff. It just means you're building it -

MS. LAURIA: You're building it more smartly.

MR. CARPENTER: - you're making it a little more smart. Yeah, exactly.

MS. LAURIA: Smartly.

MR. CARPENTER: Smartly, yeah.

MS. LAURIA: Just one of the -

MR. CARPENTER: Or smarter. [Laughs.]

MS. LAURIA: Smarter. [Laughs.] I make everything into an adverb. I don't know why.

MR. CARPENTER: Right, right, right.

MS. LAURIA: It reminds me of what Le Corbusier was trying to do early on, was this idea of master-planned cities. That the building - what did he say? That the house was a machine for living.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And the city is obviously that on a larger scale, and if these issues were taken in consideration from the bottom up, it -

MR. CARPENTER: Yeah, there's a totally different product at the end of the day.

MS. LAURIA: Right.

MR. CARPENTER: Right.

MS. LAURIA: And the mindset, too, because ecologically you could already filter in - excuse the pun - the idea of green environments.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: But it doesn't mean it's too late. We could do that with buildings that are already existing as well.

MR. CARPENTER: Yeah, instead of doing seaside, like in Florida, you could do something that's not mimicking a Victorian town, but you could actually do something that was just very intelligent in dealing with landscaping, green environments, you know, lighting potential, you know, for residential spaces. And there's a whole wealth of ways of doing it.

MS. LAURIA: And you said that you haven't really worked that much with museum installations, or maybe I intuited that from what you said. But have you had museum exhibitions of your projects?

MR. CARPENTER: Not really. We've done some museum installations years past, not recently. But -

MS. LAURIA: Because they pay nothing.

MR. CARPENTER: Yeah. No, no, we don't, but although we've been involved in quite a few different museums in terms of daylighting in museums and, you know, the sort of energy issues related to museums. But no, not really done an exhibition.

MS. LAURIA: Because it would seem like there would be - I don't know if you know the artists Los Carpinteros. They're Cuban artists who did this great intervention around museums where they talk about poverty and structure and shelter, and they had these cities made out of tents. But it's not like pitch-a-tent. It was a tent that they could pitch that was in the shape of a traditional Latin American building.

MR. CARPENTER: Oh really?

MS. LAURIA: So they would put them up on the grounds of the museums for the homeless. Of course -

MR. CARPENTER: And for the exhibition they would inhabit those.

MS. LAURIA: Yes. Right. Well, the homeless didn't, but, you know, the idea was there.

MR. CARPENTER: The intent.

MS. LAURIA: Right, the intent was there that that could - because they were made of canvas. They were basically made out of tenting materials, or you could fold it up and it was completely mobile.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And I know that in times back when the Eames, Charles and Ray Eames, were working, at some point they were going to do the Steel House [Case Study House #8, 1949. Pacific Palisades, CA] for - I guess it was whatever the steel company -

MR. CARPENTER: Mm-hmm. [Affirmative.] So they were really like prototyping.

MS. LAURIA: Right.

MR. CARPENTER: Prototyping something.

MS. LAURIA: How do you use steel to - you know, because if they did it as a prototype -

MR. CARPENTER: Now that's true. Those would be really fascinating to work on something like that, although it'd be a huge -

MS. LAURIA: Right. Well, you'd need an alliance with industry.

MR. CARPENTER: - financial - yeah, huge financial undertaking. Yeah, exactly, exactly.

MS. LAURIA: But it seems like they could benefit. I mean, that was why they did it with architects and artists.

MR. CARPENETER: Right, well, they had all those great things like the Lustron House and the Steel House. And MoMA [Museum of Modern Art, New York, NY] used to do that. Like at the courtyard at the MoMA, they used to have these prototype houses built back in the '40s [House in the Garden series, featuring Marcel Breuer, 1949; Gregory Ain, 1950; Junzo Yoshimura, 1953]. I mean, no longer, but they used to do that. Like they'd build a Bucky Dome [Buckminster Fuller, 1941], or they'd build a -

MS. LAURIA: I didn't know that. Right here, right in the city?

MR. CARPENTER: Yeah, right in the city. Yeah, they have, like, a Breuer House [1949]. You know, they build a house right in the garden. That was pretty experimental at that time, frankly. That's before the garden turned into the Phil Johnson Gardens [New York, NY]. I mean, sort of a much more of an experimental space.

MS. LAURIA: So they would invite the artist or architect to come and do -

MR. CARPENTER: Yeah, and do a real thing.

MS. LAURIA: - the installation there.

MR. CARPENTER: To do a real thing, you know, and people would come and tour it.

MS. LAURIA: Why doesn't RISD do that? [They laugh.] That's another subject. But anyway, I think that there is - part of the problem, environmentally, is the communication. I mean, that there may be - you work on a certain level with a certain amount of architects, you know, that are familiar with -

MR. CARPENTER: Familiar with what we can do. Right, right, right.

MS. LAURIA: - what you can do. But I don't think the general public really understands that this is an available technology to them or that they can exploit this. And I wonder if there's a way to filter down that information to the other group of the noncognoscenti.

MR. CARPENTER: Exactly, exactly. Yeah, I don't know how one does that.

MS. LAURIA: Mm-hmm. [Affirmative.]

MR. CARPENTER: I sort of explained how difficult it was to get a book published. It was pretty hard just doing any of those things. I mean, outside of your day-to-day sort of responsibilities. It's pretty hard to open that up.

MS. LAURIA: But educationally, when you do lectures and things, have you ever -

MR. CARPENTER: Well, that's certainly - yeah, you have the general public come to those and there's oftentimes great interest or a questions from somebody. But -



MS. LAURIA: These are the types of conceptual ideas that generally are reserved for very specialized journals. It doesn't really get to the Dwell or the Architectural Digest level.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And there are a lot of things that I think individuals can do to their environments that -

MR. CARPENTER: Well, you're right. You're right.

MS. LAURIA: - that even by using -

MR. CARPENTER: No, you could do very modest types of things that would completely change how the space behaves, you know, so -

MS. LAURIA: Right and even in -

MR. CARPENTER: And we've done a lot of those for people. I mean, like entryways or, you know, we did some work for several different people here in the city, where we just sort of took over a part of their apartment or whatever and just did like -

MS. LAURIA: And showed them the possibilities.

MR. CARPENTER: - a completely different entryway. We brought light in, and all of a sudden you enter the space and it's like you're in this cloud box, basically, and then before you enter the actual apartment, that sort of -

MS. LAURIA: And I think it would be great if that type of information were made more accessible to people, because people don't think on a daily basis about these issues.

MR. CARPENTER: Mm-hmm. [Affirmative.] Right, all that, right, right, right.

MS. LAURIA: I mean, it's great what your company does, but I think people walk into an environment, like you said, it's become very banal. We only expect very little out of our buildings.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: Perhaps we expect more out of our homes because we have more control, but we're willing to work in spaces that are horribly compromised.

MR. CARPENTER: Exactly, exactly, exactly.

MS. LAURIA: And we don't understand -

MR. CARPENTER: And we don't know, sort of, how to take them to some other level.

MS. LAURIA: Right, or we don't understand how that affects us psychologically, emotionally, physically, and I think that that's the kind of education that architects should be -

MR. CARPENTER: That needs to be - right, right, right.

MS. LAURIA: - taught and also, art students; I mean, anybody that has an interest in improving the environment.

MR. CARPENTER: Yeah, somewhat - your point is, I guess, well taken, in that a lot of this work speaks to a community of architects or engineers. Where evidence and - everybody's sort of somewhat savvy as to how it interfaces with that work, but doesn't really filter down to a broader audience. And I think, unfortunately, in many ways, what most of the public audience is exposed to are the more flamboyant cases of architecture in a way, whether it's Zaha Hadid or even like Frank Gehry. It's very, sort of, overtly public in some respects in terms of its - you know, its form making and, sort of, its presence, but it's not particularly -

MS. LAURIA: But that's an interesting point about Frank Gehry, but we were talking about how Sir Norman Foster had to overcome that problem of the bridge.

MR. CARPENTER: Of the bridge, right, right.

MS. LAURIA: Well, after they were living with Disney Concert Hall [Los Angeles, CA] - I don't know if you know this - but the people who lived in the apartment building -

MR. CARPENTER: Yeah, yeah, there was, like, sort of a focusing of light in there.

MS. LAURIA: It was reflecting into everybody's windows, and it was making it impossible for them to have a serene environment. And also they found that the titanium really heats up in the Southern California sun, because I took a tour of Disney Hall and if you lean against the building, you could get scorched.

MR. CARPENTER: It's pretty hot, really, really.

MS. LAURIA: They had to spray it, I think, with a matte spray, something to dull the surface so it wouldn't reflect so much light.

MR. CARPENTER: Something that sort of dull it down. Right, right. Wow.

MS. LAURIA: You know, and those were -

MR. CARPENTER: But also within those things, the structure is - you know, I guess this is on a whole other subject which is - maybe we shouldn't even get into, but on those things, I mean, the structure that's required to execute a building by, like, say, Frank Gehry; I mean, it's a very inefficient structure, a very costly structure. So before making it, it's very willful, completely willful, and then that's not in any way talking about efficiencies of materials or economy of construction or environmental conservation. It's completely ignoring all of that, but that seems to be what filters down and becomes sort of a high point of architecture, is that or Zaha Hadid, or, sort of, these very overtly extravagant projects, whereas -

MS. LAURIA: Because they're the extreme.

MR. CARPENTER: - whereas the things that might have a more clearly pragmatic sort of implication, you know, may not ever actually get down to the public, or the public may never pick up on it.

MS. LAURIA: But the application, I think, of what you're doing, with skinning and with curtaining and with building these outside structures, is much more economical and can also be ecologically efficient. So it could have some translation -

MR. CARPENTER: Right, right, a lot clearer, right.

MS. LAURIA: - into a broader public use.

MR. CARPENTER: Right, right, right.

MS. LAURIA: And I guess that would bring up my last question, which is, what do you want to see for James Carpenter Design in the future? What kinds of projects would you like to work on, and what do you see yourself as going to in the next level?

MR. CARPENTER: Well, I think what's happening - and I have to say our whole career has basically been based on responding to opportunities, obviously. An opportunity just comes in and then we sort of react to it or respond to it, and then those responses have typically always led us in some new direction. So, obviously, it has an underlying unity with the thinking, but each response is somewhat different. And what, as I said before, what's starting to happen is we're having clients come to us to do projects in their entirety.

And I would see us, basically, probably not trying to focus on these really huge projects but try to focus on smaller, more complex, and, hopefully, very sort of, engaging types of work, like the Israel Museum, where you can really spend the time developing a project, developing a very unique spatial environment that people will experience, and basically keep our energies on scale projects that we can really control in their entirety. And that would mean potentially doing individual houses or doing smaller cultural buildings or doing things, you know, that you can really manage and control, take control of, and we definitely don't look to run over to China and do something in Rome and Dubai, and do something - I'm absolutely disinterested in that entirely, and I'm much more interested in really trying to find great clients to do smaller, nice projects, you know, that we can really develop and work on.

MS. LAURIA: What is the city where, if you go to that city, you can see every major architect's footprint?

MR. CARPENTER: Well, you know, it'd be like one of those. Right, they would be wondering whether it's -

MS. LAURIA: Yes, I think it's Shanghai.

MR. CARPENTER: Yeah, Dubai and Doha or certainly Shanghai; yeah, certainly those things. I mean, I think because we're so involved in the materials - and this sort of comes back to the craft thing. I think, as an office, we're very involved with manufacturers and fabrication and processes, and that's one of the expertise levels that we bring to the work, is that, you know, we actually know more about how materials go together and how they're fabricated than most of the architects we work with, certainly in most - any of the architects we work

with. So we actually - we are very conscious about that whole building aspect as well as the aesthetic aspect. And I'm just anxious to find projects where you can really explore really great ideas and have people respond to them. You know, the right audiences are responding to those ideas.

MS. LAURIA: I don't know if you've ever been approached, but it would seem like a natural to do an aquarium or some sort of -

MR. CARPENTER: No, never been approached, but those are exactly the types of things I would love to get involved in.

MS. LAURIA: An observatory.

MR. CARPENTER: Exactly the types of things I would love to get involved with, yeah, where, first of all, the program's incredibly interesting. I mean, the program meaning whatever the building functions are incredibly interesting and the opportunity to just sort of reinvent a way of thinking of those things. So -

MS. LAURIA: I mean, because that's an experience that the public is always with their noses against the tank looking at the fish, and who's looking at whom?

MR. CARPENTER: Exactly, exactly, exactly. Right, right, right.

MS. LAURIA: It could be something really interesting, where we become more immersed with the natural environment in an aquarium. But I suppose aquariums are built by cities that have a certain amount of budget, and they might not be aware of the type of work that is being pioneered with integrated environments.

MR. CARPENTER: Yeah. No, but those are exactly the types of things we'd like to find, those opportunities.

MS. LAURIA: Yeah, or libraries in a way.

MR. CARPENTER: Yeah, or library. I would love to do a library. I mean, that type of thing.

MS. LAURIA: Right, because it's the idea of the relation to the Western knowledge - or it doesn't even have to be Western knowledge - but the canon of knowledge and how -

MR. CARPENTER: Exactly, exactly, and how one, sort of, organizes it with light or organizes the reading rooms.

MS. LAURIA: Right. And I guess, lastly, do you see yourself going into a direction of, maybe in the future, using more color?

MR. CARPENTER: More color?

MS. LAURIA: Color. You could do colored glass or -

MR. CARPENTER: Yeah, no, we definitely - sometimes we definitely do use the color, yeah, sort of very strongly, and then other times it's really more about just letting the light be colored by its own, sort of, changing characteristics. Yeah, no, I'm quite keen on color, although, I mean, I know most of the projects look for a stainless-steel, glass-and-white-light, but there is a richness to that, too.

MS. LAURIA: Well, color, too, is very overt, and people have different reactions to color.

MR. CARPENTER: Right.

MS. LAURIA: But there is the capability with using all the materials that you use to develop, maybe, a new color palette that most of us are not accustomed to.

MR. CARPENTER: Right, right, right.

MS. LAURIA: I mean, you don't really see umber in glass too often.

MR. CARPENTER: No, exactly. exactly.

MS. LAURIA: So -

MR. CARPENTER: So, yeah, no, color would certainly be something that we could explore or would like to explore. I mean, one of the periods of time when I was using the dichroics, it was always, like, how do you, sort of, ratchet back from what potentially could be overwhelming, you know, and almost glitzy on the one hand; I mean, sort of ratchet it back to a level of, sort of, visual percentage that it's only triggering a sort of a sense of beauty or sort of incredible color qualities without overtaking one's entire experience?

MS. LAURIA: That's something that all glass artists struggle with.

MR. CARPENTER: Yeah, exactly, yeah. No, well, there's an example of too much color -

MS. LAURIA: Right.

MR. CARPENTER: - too much access to color, right? That's the - [laughs].

MS. LAURIA: Or too much saturation. And, James, has your work ever had any overlap or adaptation for aerospace or NASA [National Aeronautics and Space Administration] or any scientific application?

MR. CARPENTER: We've never directly - no, never directly had that. I mean, we are working on some things right now in terms of what are called piezoelectric [sp] ceramics, which are panels that are coated with a ceramic material that, when you introduce an electric current into them, they can sort of open up and allow light to come in, like nonmechanical.

MS. LAURIA: Really?

MR. CARPENTER: It's nonmechanical. It's just -

MS. LAURIA: So it separates the molecules somehow?

MR. CARPENTER: No, it actually creates, sort of, compression or contraction when you put an electrical current in there.

MS. LAURIA: Wow, so it -

MR. CARPENTER: So you can actually, like, take a sheet, and they're all done with inkjet printers. These are big sheets of metal. You inkjet-print the ceramic material down in different densities, and then when you introduce the electric current, the denser that ceramic material is, it actually will contract the material. So if you punch the metal, you can actually create a whole, like, piece that will open up. It'll just sort of open up like that.

MS. LAURIA: I don't know if this is fair to have you say that on tape. It sounds like something -

MR. CARPENTER: That is patentable. [Laughs.]

MS. LAURIA: Yeah, okay, yeah. That sounds like something that you should run to the patent office with.

Well, thank you so much for your time. This is the end of -

MR. CARPENTER: No, thank you. I hope that was -

MS. LAURIA: - disc three.

[END OF INTERVIEW.]

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