



Episode 5

The Sun, The Earth, and Glass

– with James Carpenter

Introduction

James Carpenter, a creative polymath in our time, bends light to change the way we reflect, literally and introspectively. His work, both artistic and architectural structures, is grounded in the immediate effect of light, using glass as a vessel to refract it. In the experience of his work, it's nearly impossible to not be attuned to your place on Earth in relation to the sun, and the temporality of it, even in the heart of New York City. In today's episode, we'll be hearing from James Carpenter about what draws him to this medium, and the change he strives to instill in people. We'll also find out what he thinks glass would say if it could talk.

Claire Taylor:

Hello, and welcome to Change Makers and Their Stories. I'm your host, Claire Taylor, Director of Strategy at Carpenter Group. Today, our guest is James Carpenter, a MacArthur Fellow, and the founder of James Carpenter Design Associates, a cross-disciplinary design firm, working at the intersection of art, engineering, and the built environment. James, it is a pleasure to speak with you.

James Carpenter:

Nice to be with you.

Claire Taylor:

I'd like to start with an observation. The winter is casting no shadow today. There's no hint of sun, which is ironic on a day I'm talking to you about light. How does it look out your window?

James Carpenter:

Also overcast skies here, but I think one thing should be said about the qualities of light that exist within darkness. And there's often very much a neglected realization of qualities of light that exist within darkness, and some of our work has actually, over the years, taken place in Greenland during the winter, where it is fully dark for long periods of the day, only a few hours of very low light. But you begin to realize that there are, particularly with snow on the ground, there is an enormous amount of light just coming from the ambient star brightness and moon brightness, that, in a way, is perfectly legible to the eye, and you can navigate without any trouble at all in those conditions.

Claire Taylor:

You don't talk that much about darkness in the moon, in all the podcasts I've heard and things I've read, and I know you have experience in those Northern Hemisphere areas. So the moon, what role does it play? I mean, you just mentioned snow and that reflection of that light. It's so beautiful.

James Carpenter:

Yeah. We tend to work, obviously, you're quite right, primarily we're working with daylight, and obviously, working with the sun in particular and the information, the light information content within light. But similarly, I mean, the moon, as a reflecting source, is in certain environments, really dominant. In those instances, I think you begin to understand much subtler qualities of light, and how light can actually just off of slightly changing materials, like an icy surface or a slightly frosted surface. All these slightly different characteristics of snow and ice become really dramatic wayfinding elements, in terms of navigating the landscape.

Claire Taylor:

So, James, is there one project where moonlight is especially important?

James Carpenter:

Well, I would say, yeah. One project that we did in Nuuk, Greenland, was really trying to identify or make... Well, working with the Inuit people there, whose whole life, obviously, was built on this idea that there's not really a major difference between daylight and light within darkness, until electrification came. How to bring back, we were sort of asked to work with the government up there, to find a way to bring about different events that would magnify and sort of make more apparent the qualities of light that do come from moonlight, and moonlight specifically bouncing off of snowy surfaces.

So, we did one project, which spans over a road, a very narrow road that leads down to the harbor in Nuuk, and it's basically just a large horizontal ring that's floating, much like a ring that you would see around the moon when there's moisture in the air, or snow crystals in the air. Simply, the moonlight itself just bounces the light up off of the snow, and then the material that was used in this suspended work is very highly sensitive to light, and it's made apparent this ring. All of a sudden, there's a ring that's floating overhead, maybe 60, 80 feet above the road.

There are opportunities to take advantage of that in certain environments, in that environment in particular, where people are particularly sensitive to those things. I think that sort of underlies a little bit of the foundation of our work, which is really how do you make people aware of these phenomena or qualities of light that surround us all the time? But we tend to ignore them, or are not aware of them at all. So, each of the projects we do has some message to be delivered, basically, and it's hopefully a message or a content, light content or informational content, that actually makes people sort of pay attention and sort of acknowledge this event that would otherwise not be apparent.

Claire Taylor:

That's a beautiful story, thank you. So, you've been categorized variously as an architect, a designer, an artist, maybe not in that order, many hats. How do you characterize yourself?

James Carpenter:

I think my own interests were always specifically sort of focused on natural history. Through my career, through my development of my practice, nature's always been sort of a core element, and that's gone from an original interest in architecture, realizing that my interest in architecture had more to do with light. Going to the Rhode Island School of Design, and then seeing the different facilities there, beginning to work with metals, and other materials, and glass in particular there, and then eventually coming to working with film, which I used a lot in the 1970s here in the art world, in New York, doing film installations.

So, there's never been a very clear path relative to a preassigned sort of program of study to lead me to what I'm doing today. It's been more of a somewhat unconscious, but sort of driven desire to travel, to visit different areas where light is a quite extraordinary event or very particular qualities there, and how one continues to sort of develop your understanding, whether it's in physics, or chemistry, or natural sciences, how do you actually find ways to explore something which is around us all the time, and then differentiate that into events that are quite exceptional or extraordinary, into people's day-to-day experience?

Claire Taylor:

So, considering all of this trajectory of your life, artistically and professionally, are there skills that you think need to stretch, or do stretch for you across all of these hats you're wearing? What does it take on a creative level to transform ideas into something tangible, and do you think that's something that's a thread through all of those? You mentioned nature, and being very attuned to nature, but are there other things too?

James Carpenter:

Well, I think the underlying thing there is observation, that observation is really what's triggering the ideas, that you're actually sort of seeing something in a new way for yourself, how you can extract that information from its context, and in some way, sort of manifest it. That means of manifesting something is connected to your question, the sense of like, how do you find the means to build something, or construct something, or engineer something, and what are the materials available to do that, and all the complexities of doing larger scale construction.

So, there is sort of a cumulative body of information and knowledge that's sort of built up over the years, all driven towards this idea of realizing something that's really quite intangible often, and seen as something you can't really quite hold onto. So, it's a curious pursuit, but glass has really been, I think the material. Obviously, light is the subject, and glass is sort of the interpreter or sort of the element that actually allows the light to take presence or take a physical presence.

Claire Taylor:

Do you have a definition of experiential art? What it is, what it could be, how people should interpret it?

James Carpenter:

I do, I guess in a way, from the point of view that, I mean, I know experiential art is something that's become today a little bit more in the forefront. However, back in the '70s, when there was such a concentration on environmental and performance art, which sort of disappeared a little bit in the '80s and '90s, I think that there is, for me anyway, this idea of finding something that I see, and I believe that other people can see, should you be able to make it into a visible form.

And an example of this would be, say, here in New York City, something called the Fulton Center, which is a large transit center here in New York. We worked with Grimshaw Architects on an idea where the skylight at the top of the building is surrounded by sort of what's called an optical aluminum, and by shaping the form of that aluminum, you actually can take the image of the sky that exists outside the building, and basically fold that image into the building itself, so that people that move through this transit center, when they look up, actually see the sky within the space they are moving through, and if you pay attention, you can actually see the clouds moving or the change in the color of the sky, but it's in the room with you.

So, in a situation like that, where you have 300,000 people a day moving through a large public space, trying to create that moment in time in their day, where you're moving through a space, many people are moving through all the time, but everyone is sort of, in their own way, seeing this event, seeing it as a shared or sort of collective experience of reconnecting with a quality of nature that we don't usually associate with the city, because in New York, your idea of seeing the sky is typically framed or interrupted by all the orthogonal sort of construction of towers and buildings around you. So, you're just seeing these linear strips of the sky, rather than a very smooth, spherical, dome-shaped view of the sky, which this work does at the Fulton Center. So, it's really like trying to take the dome of the sky, and turning it from a convex form into sort of a concave form within the building with you.

Claire Taylor:

I had noted that the Fulton Center, which is not very far from our offices in New York, I've certainly traveled through there many times. There's both the attempt of creating a shared experience, and the potential to initiate an infinite number of individual experiences, and I was really curious about the balance of the two. You have a vision for this project, and I don't know an ideal experience of it, but at what point do you let that go, because you know hundreds of thousands of people are going to have their own experience?

James Carpenter:

Right, right. Well, I think just if you look at the body of our work, it really deals with two things. One, it deals with the position sun in the sky, and the position of you as an individual on the Earth, and how each person observing one of our works sees something that's completely unique to their time and place, at that particular moment. So, you're quite right. Everybody is seeing something completely different at the same time, or you're potentially sharing in this sort of richness of changing experience as you move through or past one of these works. You're quite right. I mean, letting go is a good analogy for that. It's sort of setting up the operative elements that can trigger an understanding of these phenomena that are happening around us all the time, but you just let people discover it within their own path, or within their own route, or their own sort of time as they move past or through this space.

Claire Taylor:

And today, everyone's walking through these spaces, especially the Fulton Center, in a way, looking into their personal handheld piece of reflective material. And I was wondering how this variable of the phone has become a consideration in your work. It's another piece of reflective material that images from your building may be bouncing off of, and I just thought that was really cool.

James Carpenter:

I mean, I guess taking the phone as just a reflective surface would be one thing, but to take it as a device which is sort of carrying all this inherent connectivity to the world that you may not be occupying at that very moment, I think our work is very much about the immediacy of your experience at a particular location. Personally, I think a lot of the reliance on these devices is a way of sort of disassociating you from the reality of your experience, or the remarkable characteristics of these different environments. It's all being sort of captured and stored in a way to be experienced later, but that's avoiding the idea of experiencing in its own reality.

Claire Taylor:

So, were you thinking experiential then, way back when, in the days of the Glass Forest?

James Carpenter:

Yeah, most certainly. The Glass Forest got probably done in 1971, I think, somewhere in there, 1970. I think a lot of the work, that's actually working with Dale Chihuly at that time. A lot of these early projects were freezing neon and ice blocks and other things, which were all very temporal, and obviously sort of experiential, in the sense that they had sort of an activated presence that one needed to experience over a period of time. But the Glass Forest was really done at a time when glass, working in glass, was quite a new endeavor.

All of us at the time who were working in glass were really figuring out how to work with this molten material, and take advantage of its inherent characteristics, which are obviously fluidity and the ability to cool quite quickly, making very fine, delicate, tubular structures. So, that Glass Forest was really pushing glass in a way that we'd not ever seen done before, using that sort of fluidity of the glass to make these tall, thin cylinders. They would have some movement with the wind, and sort of a sense as a group. They were almost like a frozen forest.

That work, at that time, and certainly the work that I did in film in the '70s, which were really film installations, were entirely about experience. It's not film as sitting in a theater and watching a narrative that draws you out of the space that you're in, into the film narrative, but rather, using blocks of films to define a new space that you would be stepping into and experiencing. Examples of that would be this one film, which is a migration of salmon, done out in Seattle, where a series of film cameras positioned over the river captured sort of the migratory path of salmon, moving up through a film frame, into a moment of darkness, into the next film frame, and so on, as it went up through the river. And then taking that film sequence, and then re-manipulating the timing of the film, and then showing it at a museum or gallery where when you stepped into the space, there was actually a river flowing across the floor, and you could walk up to it and the fish would be moving past you, and you would be able to observe that sort of migratory phenomenon.

But more importantly, and I think this is what interests me the most about experiential work, is that your eye, I think, is a great editor of information, in the sense that it tends to segregate information that it's comfortable with, and allows you to absorb consciously, and sort of tends to dismiss information that it's less responsive to. So, you have information in your recording, sort of unconsciously. So, conscious recording is really obviously memory, and unconscious recording is more about dreams, but using film, in that sense, is really creating an environment that you can step into and experience in a different way than it is in nature.

So, the work has always been about that. It's always been about trying to connect you with these events that are all about time, and setting up a new experience for the observer. Many of those films are precursors to some of the build work that we did later in the '70s and '80s, and going on today, where they do have cinematic characteristics, and as we discussed a little bit earlier in the podcast, it's again, trying to set up a situation where the individual and the source of light, and that sort of cinematic interaction between the two, creates this unique experience for the individual, but simultaneously, other people are observing the same connection. They're also in the same position of being in their own unique location in relation to the sun, and recording that cinematic event in a slightly different way. So yeah, experience is entirely the grounding of all of the work that we do, and how people can really involve themselves or engage themselves in these dynamic events.

Claire Taylor:

We've talked about some projects that are urban in nature, and well, maybe the very first one with the moonlight was more in an open setting, but there's a lot of variables there to think about. Does nature have to try harder to connect with people in certain settings?

James Carpenter:

Definitely, definitely. Just sort of what you mentioned earlier, it's just people walking down the street, looking at their phone all the time, so there's that issue of complete self-absorption and distraction that is, I think, plaguing a lot of our real experience. And my point is that the nature is around us all the time, and we just don't see it, or we're just not acknowledging it, because it's something that we've almost begun to edit out of our needed experience.

There's a real tipping point here in terms of how people respond to the world around them, and sort of what information they're deriving from the reality of the context, as opposed to a more synthetic experience, which is really leading towards virtual reality and all these other undertakings that are happening. The real thing I'm trying to do is, how do you set up situations that people can actually acknowledge the presence of these different events that are here in front of us, and sort of separate yourself from this bubble that we're all sort of putting ourselves in, relative to taking in this information from virtual reality, or from keeping your whole life in your phone, basically?

Claire Taylor:

Yeah. In a way, do you have to, in the work that you're doing, overcompensate to give nature a boost in certain environments, make it hyperreal?

James Carpenter:

Or just allow for it to present itself in a way that it can be the dominant thing in your experience or in your view plane, basically, not necessarily having to amp up its presence. I think it's just having its presence be a little bit more isolated and foregrounded, as opposed to trying to duplicate it or manipulate it in some way to overcome its actual phenomenology.

Claire Taylor:

What do you believe will be the main drivers of artistic innovation in the built environment over the next few years?

James Carpenter:

My perspective, the hope is that, I mean, obviously, a lot of architecture and built work today is exploring forms, and relying a great deal on just computer-driven geometric topography on surfaces. That's fine, but I don't think it's necessarily leading us to a place where you can understand your particular environment better.

An example of where I think things should be going is, say, World Trade Center 7, which is a building down here at the World Trade Center site, the first building built after 9/11, which we were fortunate to work on with SOM. That whole project is really based on the qualities of light that exist in Downtown Manhattan. So here we are, we're sandwiched between the Hudson River and the East River, we have a high number of beautiful clear days here in New York. Light is very tactile, and very sort of present here in New York, and that whole building is designed around how does this building sort of actually utilize daylight to activate the environment around the building? How does the building give back to its neighboring environs, qualities of light, and awareness of light, that would otherwise be robbed from the public realm or taken by the public realm, when a large structure like that goes up?

If you think about most buildings, there is sort of lip service given to daylighting and daylighting presence, but normally, it's always the idea of using daylight to illuminate the workspaces within the building, meaning you're privatizing light, which is a natural public resource, and we really look at it the other way around, that a building has a reciprocal opportunity or responsibility to give light back, in a different way

that it's being taken from the public realm. So, there is this something that's not being really done at all, but I think it's setting up sort of a more responsible position in terms of how when you're building a building, it's not about building my big object in your neighborhood, it's about how do I work towards enhancing the quality of life in this area, where this building exists? Those are just underlying goals. I think [inaudible 00:22:13] a broader social role to play in today's environment, and I'm not sure architecture is really addressing those things.

Claire Taylor:

So pulling on the skill set and the strings that connect to that artistic in the architecture might actually be a benefit, ultimately?

James Carpenter:

Well, I think so. I think so. I'm really speaking about taking a resource that's here, and making sure that it is being deployed and utilized for the benefit of the public, as well as for the occupant of a building. Now, that's a very simplistic way of describing it, but you can make a building be highly responsive to its environment in a very rich way, where people actually look at the building and acknowledge that there's something happening with light on its surface, and what it's giving back to the public realm, as opposed to simply a flat glass plane that's just reflecting the sky, or doing something of that sort.

There's not enough complexity there, and that's what you have to really remember about how our eye operates. Like if you think about the eye and where we've sort of come from, normally, the eye is, say, in nature, you're looking at billions and billions of illuminated surfaces, like if you're in the forest or in a landscape, there's billions of surfaces that are being illuminated by light, and your eye is doing an enormous editing to sort of simplify the complexity down to a recognizable or understandable sort of environment. A lot of times, architecture is aiming towards a simplification and sort of utilization of light in a very simplistic way, and I think there's an opportunity to actually use surfaces to have the eye operate with this idea of volumetric light. The light has to hit multiple surfaces simultaneously for you to understand the depth, and sort of richness of the world that's around you. It's not necessarily a singular surface.

Claire Taylor:

On the same topic, glass, you've described it as being densely packed with information, more than anyone understands, and that glass has a unique capacity for enabling a collective to our environment. It sounds like what the World Trade 7 and some of this concept of giving back is part of that idea.

James Carpenter:

You're right. Glass, for me, is remarkably fascinating, and we have, I think a very limited... Most people, when you speak about glass, they associate it with objects, or vases, or a simplicity of a glass window, but glass is like one of the few materials that exist that can change its capabilities, basically. It's a non-crystal and solid, it's like a very unknown type of material. It can, as we all are aware, it can be fiber optics, circuitry, it can be nose cones on missiles or rockets, or it could be anything, because it has this capacity to constantly change its compositional performance. So, you can add multiple chemicals, you can create very complex glass structures. They're used around us all the time. You were just talking about the telephone, or the iPhone. Obviously, glass is making a lot of that possible.

So, it has this really remarkable transformative capability as a material, and I sort of almost think of it more as it just has this sort of magical quality to it, and that content of information that exists in it, like with optics, it's really been the material that's driven science. They always say science is the history of optics. It's allowed us to look into worlds we didn't know existed. It's allowed us to sort of understand worlds we never knew were there. So, I think that capacity of the material is very mythical, in a way.

Claire Taylor:

Right, it's literally the sands of time.

James Carpenter:

Exactly. Exactly. Exactly.

Claire Taylor:

When you think about it. If glass was your time capsule, what would you like it to reveal in 100 years?

James Carpenter:

I said something earlier, which is my interest is really in light, and glass is sort of the interpreter of light, sort of the embodiment of light and interpreter of light. I think to your question, it may not necessarily be glass, looking forward to glass, but I have a very personal opinion of what light is, and it really comes down to the photon. I really feel that there are two types of photons. This is not a physical fact, by any means. This is my own little way I think about light.

I think about an embodied photon, which is a photon, which is light generated anywhere from 20 minutes ago on the sun, or like nine billion years ago, or eight billion years ago by some stars further from the Earth, and that photon is coming here to the Earth, and we are being essentially bombarded, 24 hours a day, by the history of the universe. Basically, the light is still arriving here from billions of years ago. So, if you think about our presence here, we're basically receiving all of this light. I have a feeling that photon, I think there may be, and we don't know this yet, I think the photon could be considered an artifact, meaning that each photon is carrying a presence of its history.

And a very simple way to think about this is that when you're in a room, say, in front of an audience, say, or speaking, each person in that room is sort of seeing you, but that same information of light, say, bouncing off your face or your figure that's going to those individuals, that same light is sort of moving to the surfaces of the room, and it's sort of basically imbuing the entire room with your image or your information, but it's not being interpreted or received in the same way as our eye receives it. So, there's this field of information that's around us, and we're trying to capture it, trying to capture what these fragments of information are, and then represent them so that they can be understood.

Claire Taylor:

Well, that would be quite the time capsule to open, if all of that were to be revealed, looking at it a different way.

James Carpenter:

They sort of say the history of the universe, the light hasn't arrived here yet.

Claire Taylor:

I know.

James Carpenter:

The only reason we don't know how old the universe is, is the light's still not arrived.

Claire Taylor:

It's totally mind-blowing. And looking at that question a little bit differently, based on what you've said in the past, if glass is a conduit of information, literally, of real-time information, and that relates to this photon idea too, what do you hope it conveys? It's real-time all the time, sending out information, what would you like the receiver to comprehend?

James Carpenter:

Well, I think this comes back a little bit to a few things we've touched on, which is this presence of nature, or sensing that people are disengaging from that experience in our society today. And my hope would be that somehow this information that glass is capable of gathering and broadcasting might be a way of reawakening or reopening this connection back to nature, that there's a more collective understanding of the world around us, rather than this more individualized understanding.

Claire Taylor:

Thank you very much. I guess the only other question I would have related, is if glass could talk, what would it say?

James Carpenter:

I would say glass would say, "We have an unexplored future in front of us, and a future that is very positive." That would be my take on it.

Claire Taylor:

Thank you, James. It has been a lot of fun to talk to you, and I'm wishing you all the best in creating this future with glass.

James Carpenter:

No, thank you very much. Delighted to speak with you today.

Closing:

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