

Pulse Topology: A Conversation with Artist Rafael Lozano-Hemmer

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Explore the immersive exhibition at the Kemper in this interview with the artist.

Any recent visit to the Kemper Museum of Contemporary Art or even a quick scroll through your artsy friend’s Instagram will show you the well-lit landscape of *Pulse Topology*. *Pulse Topology* is an immersive light and sound environment created by Mexican-Canadian artist Rafael Lozano-Hemmer. This site-specific project features an upside-down canopy of peaks and valleys made from 3,000 suspended light bulbs that mirror the pulse of visitor participants. The immersive environment highlights the basic but essential biological element—the heartbeat—shared amongst us all.

While the exhibition features many firsts for the artist, the most notable one may be that it was created, constructed, and opened during a pandemic. Amidst travel delays and community restrictions, Hemmer himself had not yet seen his *Pulse Topology* piece in person until early fall 2021. I sat down with him and the Kemper team after he saw his latest exhibit in person for the first time. We chatted about drawing inspiration from his nightclub-owning parents and why the *New York Times* called him “death-loving” but mostly, we talked about what art looks like in the age of COVID-19.



Photo courtesy of Kemper Museum

What first interested you in the world of light and sound art?

I grew up in Mexico City with parents who were nightclub owners and the artificial lights, strobes, disco balls - all of this is part of how I grew up. Most of the time, I think of art as a good party. You can play good music and bring in ambiance with lights but it's the people that make the party. You create a setting but it is only in the arrival of the people that the participation of the piece comes alive.

My interest with lights comes from this artificial lighting of the nightclubs. I think this is significant because if you think of light artists like [James] Turrell, [Dan] Flavin or [Robert] Irwin, a lot of the discussion around light has to do with something more spiritual. Turrell talks about an inner light whereas I'm more into the lights of disorientation. The lights of the club that allow you to be somebody other than yourself. It's this moment where you embrace the artificiality and it allows you to have this carnival-esque moment.

So when I work with lights and sound, I'm always thinking of it in relation to the visitor. How can this be made significant to their presence, to their visit? And vice versa. How can the wire of 3,000 heartbeats become something that is beautiful and memorable? I actually just saw the piece for the first time and I really like the non-interactive part of it.

Even if you're not interacting, you're still surrounded by 3,000 vital signs. And each person has their story and some people came in couples or families. Maybe some enemies are represented [in the lightbulbs]. People of all ages. I think that is interesting - seeing these very private pieces of information become a landscape.

You've done other work that relates to human bodies or parts of humanity, like your fingerprints installation, is this a subject you purposefully use in your work?

For sure. So I've worked a lot with what we call, biometric abstraction. By abstraction, we don't mean something that is representative but abstraction as in separation of biometric data. I think for better, and usually, for worse, we live in a metrics age where everything is measured and quantified. And constantly our vital signs, our fingerprints, are letting us into our phones or into our countries. The desire to control and police people is imbued right into these devices. What we try to do is use these technologies of identification and surveillance for more critical or poetic approaches. I think there is so much potential in using our fingerprints as an expression of our singularity.

Your work does a lot to bring communities and shared experiences together, how do you feel like you are still part of those pieces as the artist even with all the participants?

That's where the club idea comes in. As the artist, you're the designer of a platform and it's a platform for people to self-represent. One of the humbling parts of this type of work is that if no one participates, the piece doesn't exist. You set the conditions, the constraints, how's it going to work, how's it going to be read, but then you lose control of it. I really like this idea of an artwork that is out of my control, I think that artists are control freaks but there is a moment where you say the artwork needs to have it's own life. I've been saying that it used to be that you would walk into a museum to be inspired by the imagery of an artist but now that has been inverted. It is the artwork that listens to you, that senses you, that looks at you, and it is the artwork that is expecting you to do something interesting with it.

I like that because it gives the sense that the artwork has a certain autonomy and a certain life that goes beyond whatever I did. In a way, it's like having a child. When you start designing a piece, you feel like you're trying to create some limits but then there's a moment where you feel like you have to let go and let it have it's life.



Photo courtesy of Kemper Museum

What kind of parent are you to your art?

I am a super helicopter parent. This is why it's so interesting to see the piece for the first time today because I feel a little bit like I abandoned this artwork. The pandemic prevented me from getting to Kansas City until now but now that I see it, I am super proud. I think that we did a good job. This is the first time this project has been done and I just learned four things about what I want to do for future variations of this project. I may even do them here.

It's the same thing with kids, I have three kids and you gradually let go and you never really let go but you let them have autonomy. That's so cheesy. To say the artworks are like children. But it's interesting because this piece is so not just me. There's also an engineer, an industrial designer, a programmer, the entire team here in Kansas City that made this project happen. So the metaphor runs short when you realize that this is really a village to create something like this.

Well, let's talk about how this piece came to be. Starting from the beginning to where we are now with the Kemper team.

Jade [Powers] and I met about a year ago - we had been talking for awhile. I met Erin [Dziedzic], the curator of *Pulse Topology*, in Savannah. She curated a show of mine there in 2011. When she moved to the Kemper Museum, she wanted to continue working with me - bless her heart. I had the idea of working with heartbeats because it's a language that I've been developing over so long and I knew that I had learned a lot from previous iterations of projects like this. I had proposed to make a really ambitious version of the idea. Most of my previous *Pulse* pieces have had 100, maybe 300 light bulbs. This is 3,000 light bulbs. Most of the previous *Pulse* pieces have no sound. We added sound to this one. Most of the previous pieces had a contact sensor that you had to hold [to interact with the piece]. And now we had to deal with the dynamic of COVID-19 in this so we developed a sensor to be able to capture heartbeats from a distance without contact. I knew all of these ambitious things were technically possible.

We got to work in Fall 2020 and because of COVID-19, things were complicated. We didn't have access to the gallery - I had never been to Kansas City, none of my team had. We relied on the team at the Kemper for everything from diagrams and sketches, like 3D simulations, to dozens and dozens of video conferences to really get an approach to making this work.

COVID-19 affected not only the entrance of our bodies into Kansas City but also some of the equipment due to the worldwide shipping disruptions. Circuit boards from China might take you normally three weeks but this time, it took two or three months. We had to be flexible on when this could start. I have admiration for the team because they kept calm, they persevered. It's a real zen work to do because it's almost like weaving and you have to have the patience to do it well. Which is actually kind of related to early computing. The very first computer was inspired by the Jacquard loom. [Author's Note: This is a great time for a Wikipedia deep dive but if you want a quick summary, the Jacquard loom simplified weaving in the 1800's and because the design was so innovative, ultimately inspired early computer programming.] Weaving a system is a very interesting craft. In a way, we've created a three-dimensional tapestry with instructions we sent. It was the people here who put it together so I'm super fortunate to have them.

How does it feel to see this for the first time?

Most of the time as we're designing a piece, I see it every day and I see it evolve as we make modifications. This time, I still saw it evolve but it was on a very tiny screen. When I arrived here and went into the exhibition, it was like seeing my work for the first time. I enjoyed it. I thought "whoever did this, did a good job." It's such a spatial project. Sometimes my work is in video so you know exactly what it looks like when you send it off but this, you have to understand the peripherals of it. How does it work when you

hear it? And when you participate? All of that was in my imagination so to see it materialize is very satisfying.



Photo courtesy of Kemper Museum

There are so many firsts you're getting in this work when it comes to the technology and the physical pieces of it - how do you feel like it is different from previous work thematically?

For a long time I've been working with heartbeats. Of course there are many artists before me who have worked with heartbeats. We have a whole chronology - I am interested in understanding what I'm doing not as something that is new but something that is a contribution to an existing body of experimentation that goes back decades. In terms of themes, one of my biggest inspirations is an American composer who just passed away this year, his name was Frederic Rzewski. Frederic Rzewski is one of the fathers of minimalism. He did many things but one of them in 1971, he did a composition called *Coming Together*. It's really about the micro-politics of people that don't know each other, having a shared experience. A very simple concept. The objective of art is for people to come together. Though it sounds a bit hippie, this is exactly what *Pulse Topology* is intending to do. Especially in the era of social distancing. After a time where we've been seeing each other on flat screens, keeping away and keeping in our bubbles. To be immersed with others in a space that is itself made out of the presence of others is significant.

The piece has to do with rhythms, with this idea that the heartbeat is the very first sound we hear. My very first *Pulse* piece came when my wife was pregnant with twins and being a nerd, I learned that the ultrasound machine could pick up the individual heartbeats. I asked for two ultrasound machines so we could simultaneously hear the heartbeat of the boy and the heartbeat of the girl. And they were very different heartbeats. There was a rhythmic pattern that created this music and I thought, "let's take that and turn it into a larger concert." To visualize the pure heart but also the heart in relation to other hearts. So that remains a desire - how do you make tangible the rhythms that keep us alive?

It touches quite a bit on death as well. You're touching on the beginning of life but also the end of it as there are heartbeats that disappear every time a new one is added.

The piece is a memento mori. After 3,000 people participate, your own heartbeat will disappear from the room. And with that, the piece is also about reminding us to be mindful of our short time in life. The New York Times called me "death-loving, crowd-pleaser" and I really like that. It's a stereotype that Mexicans love death. And it's not that I love death but I love thinking about death as a way to understand life. Montaigne said "to philosophize is to learn to die" and I think that's similar to art. Why do we make art? What is a legacy? An artwork is just a way to encode a set of feelings or preferences or questions or criticisms that then can be experienced by others, and in so doing, creating a continuity. I think like Montaigne, we just can't help ourselves but create because it helps us extend our own life and the patterns that made us and will make future people.

There seems to be more of a celebration of death in other cultures whereas Americans have a bit of fear or fragility towards death.

It depends on which Americans because people bring their own customs and traditions towards death but other cultures have a bit of a taboo towards death. There is also a cult of youth in America so no one wants to acknowledge that they are aging and to be honest, it's delightful. It makes people fun around the themes of aging. I quite enjoy people who are self-deprecating about their bodies aging. At the same time, you must take aging as a process of learning and as a process of understanding what really matters. As I get older, I'm seeking more and more of this support to understand that it is all finite. Most of the art I'm attracted to observes those grand narratives about the end of our life. Not as a depressing thing but a celebration or appreciation of the moments we have.



Photo courtesy of Kemper Museum

Do you feel like you've had different reception from different ages or age groups of visitors?

I don't think there is a pattern that emerges among age groups but I'm interested to learn myself if there is.

What I do see a difference in is not across age groups but across countries. I made a project similar to this called *Pulse Room* - we showed it in Donetsk, Ukraine. The art center it was in, it's a very industrial area that is economically depressed. I had a whole bunch of hopeful young people participating in this piece and I was so excited by these young people and the art center that they were involved with. The project moved on to it's next stop and just a few weeks after, Chechen rebels invaded Donetsk and the whole art center became target practice for them. It became very militarized and this hope that you felt with these young people now you knew was decimated by the impending war.

The work moved to Madrid, Spain and we were able to tell them that right now, these heartbeats that you're seeing here are from Donetsk. They are from people who are now under war. And that gives me goosepimples - it adds a gravitas to it. The context is

not all the same. I don't like when people say the heartbeat is universal. Yeah, it's universal but those people in Donetsk are under duress and we are not.

When we start the new pieces, we have to populate it with heartbeats. I think we started with heartbeats from Australians - from The Museum of Old and New Art. Gradually, as people participate, the Australians go away and now we have Kansas Citians.

You must have hard drives of heartbeats somewhere.

We don't store the heartbeats. As someone who believes in privacy and human rights and basic freedoms, we never record heartbeats. We have an installation in Australia right now so we took the current heartbeats that were in that piece at the time. It's a set of numbers for each heartbeat with a timestamp and the activity of the heartbeat is synthetically generated by the information that the sensors give us. So the electrocardiogram - this is not medical grade, you know? It's basically the computer observing tiny variations in the coloration of your skin and being able to detect the repetitive pattern of the pulse and saying that's the heart. We generate the light and sound, the pulsing curves, based on the read-out that the sensor gives us. Whenever a new heartbeat gets added, each of the 3,000 previous heartbeats moves down in position and eventually they all disappear.

How did the past two years in working through a pandemic affect this piece? How did it change how you would've normally approached this?

The first part was practical. How do we get this installation there in time? How do we build it? The answer was lots of video conferences. But also, how do we make sure this stands with the best hygiene practices in place? The previous versions of this work were all contact-based and the honest truth is that's not very safe at this time so making a photoplethysmography system - the system that captures the heartbeat at a distance - was part of our response to COVID-19.

On a more symbolic level, the fact that the piece deals with life and death. I think art is really well-placed to mourn. We've had an unbelievable loss. I know that some people, especially in the United States, pretend that this [pandemic] is not happening but this is an enormous loss. It's impossible to calculate the loss behind those numbers - there are people, families, decimated by this and some from much more disadvantaged areas. Mourning is a really important function of art and a piece like this can be seen as something that helps you mourn, helps you understand the continuity of life.

There's also the aspect of celebrating, that we made it through, that we're fragile. We have a responsibility to others. I've been saying about COVID-19 that the atmosphere is trying to kill us and I think even though that is hyperbole, you can't accept that the atmosphere is neutral. We've become very aware that our private breath can become a public breath and then we're all affected by it. My hope for the pandemic is that certain acts of solidarity can be taken. The problems that we have are planetary problems and as Buckminster-Fuller used to say, we need planetary solutions.

My hope is that terms like "flattening the curve" can become part of our vocabulary so that we can begin to address what is an even bigger threat, which is climate change. Have we learned something from [the pandemic]? I hope so.



Photo courtesy of Kemper Museum

What's next after this?

Let me boast - because I'm excited. I've got my retrospective opening in San Francisco on October 1st. Then I've got a solo show at the Brooklyn Museum at the end of October. And then I've got a massive immersive experience in North Carolina in Chapel Hill, called *Atmospheric Memory*, which is about the atmosphere trying to kill us.

What have you learned from this project that you will be taking with you to future projects?

Subwoofers. I really like the subwoofers that the Kemper is using. I'm going to amp them up a little bit. It needs to be like a nightclub. You want to feel the heartbeat in your chest. I'm also going to try to create a topology that is taller and bigger. I'm also curious about what would happen if the floor was even more reflective. I love how the reflective floor in the Kemper makes the topology look like a landscape with the sensors as little sunbeams so I'm curious to see what would happen if we lean into that. At first I thought we wouldn't want a reflection so you can focus on the living, on the pulse topology in front of you, but the reflection reminds you of the Underworld and adds dimension to it.

Do you feel like this is the closest you've gotten to that nightclub effect?

No, I have very crazy, carnivalesque pieces that are closer to a nightclub. This one is a little more sullen. Some artworks are more reflective of yourself. The point with this piece is not to lose yourself but to find yourself inside thousands of other people.

If this is people's first foray into this medium and they want to see more artists/artwork, where would you recommend they go?

There's a lot. I pay close attention to pioneers of this medium because a lot of people call it "New Media" but I don't know an artist that likes to call it "new". If you think this is new then you are ill-informed. I really like the work of Trevor Paglen. He uses languages of control, surveillance, global networks and manifests them and makes them tangible. I like his work a lot. I like the work of Morehshin Allahyari, who is an Iranian artist. She works with mythological generated imagery of powerful women from Iran that become 3D-printed objects. I like the work of Guillermo Gómez-Peña, who is an older-generation performance artist that complicates ideas of identity and gender and stereotypes of being Latino.

In terms of phenoma to follow, stay away from NFTs. The work that is most interesting to me these days is environmental awareness. I have a daughter who is a militant environmental activist. She's 17 and she's educating me every day on how important it is that we become part of the solution. Says the guy with 3,000 lightbulbs. But they're LED lightbulbs!

I think media work is becoming more important the more we're surrounded by technology. If you're a museum and you're not doing media work, you're doing yourself

a disservice because you're missing entire generations of human experience. In the United States, the average person has eight hours of screen time per day. It means that if we want to understand ourselves, we have to work with these technologies to really ask pertinent questions that mean something. I'm happy that more and more media art is not seen as some kind of strange, playful thing but rather as a contribution to the established fine arts.

Rafael Lozano-Hemmer: Pulse Topology, will be at the Kemper Museum of Contemporary Art June 25, 2021–January 2, 2022.

Photo Credit: Installation view, *Rafael Lozano-Hemmer: Pulse Topology*, June 25, 2021–January 2, 2022, Charlotte Crosby Kemper Gallery, Kemper Museum of Contemporary Art. Photo: E. G. Schempf, 2021.