

Q&A with Lucianne Walkowicz

Interviewed by Joelle Seligson

At any given moment, Lucianne Walkowicz might be rehearsing with her indie-punk band, training for a marathon, delivering a TED Talk, or helping a stranger determine whether there are, in fact, pyramids on Mars. An astronomer at Chicago's Adler Planetarium as well as a TED Senior Fellow, Walkowicz is dedicated not only to studying science but also to sharing it with the community. And that community goes far beyond Chicago: as part of the Galaxy Ride, Walkowicz biked 300 miles (483 kilometers) to bring the universe to the people within it. (www.adlerplanetarium.org/galaxy-ride). Shortly before she set off along the Route 66 trail, she chatted with *Dimensions* about her mission.

How are you preparing for the Galaxy Ride? I know that's coming up.

Well, I've been riding my bike a lot, really. It's just a matter of logging miles and getting used to being on a bike for long periods of time, so in addition to my usual commute I've been taking some long rides around the Chicagoland area, including—I went on my bike to our Perseid meteor shower event last month out in Cantigny Park, which is about 35 miles [56 kilometers] out west and then 35 miles back.

Nice. So are you feeling ready?

I do feel ready. To a certain extent it's irrelevant if I don't, because it's happening on Friday.

And how many people are you expecting to join in?

Well, it's not a public ride; it's a group of us from the Adler that are riding from town to town, and we're hoping that if this goes well next year we'll be able to open up to the public. But at the moment it's myself doing the full 300-plus miles, and then we have a team of five or six people who will be riding along for some of the legs who are educators, designers, facilitators at the Adler, who will be helping with the demo materials and the programs we'll be doing.

Why did you decide to take up this effort and create this initiative? What's your goal?

Well, my goal and I think the uniting idea behind the Galaxy Ride is inclusiveness. We are taking science to where people are. There's something called the "threshold problem" with museums, where in order to go to museums or something like a planetarium, you have to be the kind of person who thinks of themselves as the

kind of person that goes to a museum or a planetarium. And lots of the communities that we're visiting, even though they're a short drive from Chicago, they're not well served by cultural institutions, either because they're small towns or because they're a little bit out of the way. So what we're doing is really taking science on the road to make an invitation to people to come explore space with us, and to give people the idea that they are empowered to do so—that science is for them as much of a human undertaking as something like literature, art, or music.

Right. And I know this is not your first foray into these out-of-the-box approaches to communicating about science. Can you tell me a little bit about some of your other past experiments?

Sure. Probably what I'm best known for is Science Train, which was an initiative that started in New York where astronomers and other scientists just rode the train and stayed on one train line from end to end to talk to people about science, with signs that said "I'm an astronomer, I'm a scientist, ask me anything," as a way of again bringing science out to where people are and inviting them to ask their own questions about the universe around them.

Are there any specific anecdotes that you remember from Science Train or, say, the Intergalactic Travel Bureau, in which you felt like you really connected with people—or even something that surprised you?

Sure, there have been tons of stories of people that asked questions and great conversations that we've had. I always think it's funny that the number one question that we get asked is, "Why are you doing this?" Whether it be Intergalactic Travel Bureau [guerillascience.org/event/itb] or Science Train or what have you, people seem really surprised by the idea of scientists being available to answer their questions. And I think that's because science has this lore around it, as though it's something that's unapproachable, literally unapproachable—the idea of there being an ivory tower in which science happens is itself a forbidding image. So I think for people to encounter science in the wild, as it were, in the same way that you could see an inscription of a famous quote or poem on the side of a building or a piece of public sculpture—nobody is surprised by seeing a sculpture in the park, right? But people are surprised by scientists taking time out of their day to talk about what they do. So a lot of what stands out to me is how surprising people find it, because it kind of seems like a no-brainer to me.

Of course, I've also had lots of terrific interactions with people. Probably my favorite Science Train question was a man who we ran into, who asked me whether there were pyramids on Mars. So pyramids on Mars is one of these topics that you might see in Time-Life books about the paranormal or something like that. They're one of these things that appear a lot in conspiracy theories online. Now, what I

liked about this interaction was that this was a man who just really wanted to know—he didn't have an axe to grind about telling me there were pyramids on Mars and I was part of a conspiracy or something like that, which does happen occasionally. But this gentleman just wanted to know if there were pyramids on Mars, and can you imagine being a person trying to Google that question and sort through the information that's available online? So he was sort of like, "Oh good! Astronomers! Now I can finally find out if there are really pyramids on Mars or not." So we talked for a while, and there are, for the record, no pyramids on Mars, but Mars is definitely an amazing place, so I got to share with him some of the reasons that I think Mars is really cool.

That's good—you put a positive spin on it! You have such a wide range of passions. How does your love of science and astronomy connect to your art and your music?

Well, sometimes it does and sometimes it doesn't. A lot of the artwork that I do and music that I do doesn't really have much to do with science and space, but occasionally they collide in interesting ways. Last year I had a sound art installation at a gallery called Artisphere in [Washington,] D.C. that was data from NASA Kepler that I had taken and turned into sound to provide people with a direct experience of the pattern and the data that would be otherwise inaccessible to them. And that, I would say, is definitely a piece of artwork where I was pretty motivated by the artistic idea, but I did end up creating those sounds in part because I was experimenting with it as a form of data analysis. And ultimately it sort of dovetails nicely with that message of inclusivity, which is a big part of what I do. On the other hand, I have [inaudible] that have nothing to do with science; my band doesn't sing about space or anything like that, so it just sort of collides when it collides and doesn't when it doesn't.

I think collide is probably the best verb for it. So once the Galaxy Ride is over and you recover a little bit, what projects are going to take your focus?

Well, I'm running a marathon two weeks later, which I sort of forgot about in all this.

But that's not science related, is it?

No, no, not at all. No, scientifically, I'm looking forward to October being a time where I have more time to go back to my research. I work on studying habitability of planets around other stars as informed by what the stars themselves are doing, and I'm really looking forward to getting back to actually doing some research on the day-to-day, which is a little bit hard to do when you're on a bike.

Yeah, I'm sure. Well to wrap up, is there anything that you would share with *Dimensions* readers, who are primarily professionals from science centers and museums, about how they might learn from your approach to science communication—things that they could bring to work and bring out into the community?

Yeah, I think I would rope in—beyond my own personal take on science education or interacting with the kind of information that might be in museums—I might broaden that just to say that this is an approach that I think it goes throughout the Adler as an institution itself, which is that we put a lot of emphasis on personal interaction. In an era where a lot of information is just available online, one has to ask oneself, "What is the role of cultural institutions? What can we offer people that wouldn't be accessible to them from, say, a book or a website?" And so I think for our guests coming into the Adler, one of the things I like about our approach in general and that is very much within my own ideas about how I like to see science communicated is that it's very much about providing people a personal interaction with the people that really care about this stuff. All of the Adler astronomers, myself included, are deeply caring about not just their research for its own sake, but about sharing it with other people. And so I think that as much as we can give people that added value of understanding: Why do museums exist? Why do planetaria exist? Who are the people that run those institutions? They're not just cavernous holes full of information. And so, I think we can give a real human dimension to what we do that really isn't available anywhere else.

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