Dorothy Santos — Arts & Ecology Festival

Presentation transcript · Timecodes and speaker labels preserved

00:00:00:00 - 00:00:25:03

Speaker 1

Know everyone. My name is Dorothy Santos. I am a faculty in the art department and Core Faculty in Creative Technologies program here at UC Santa Cruz. I'm presenting hidden frequencies, systems and logics of care within emergency infrastructure. I want to start with this ad that some of you might be familiar with. Maybe not. I also want to say that some of the contents of my presentation might be a bit sensitive.

00:00:25:03 - 00:00:35:14

Speaker 1

I'm talking about emergency, crisis, and disaster, including some personal experience. So I want you to do what's best for you.

00:00:35:16 - 00:00:40:14

Speaker 2

Who are.

00:00:40:16 - 00:00:52:23

Speaker 3

In my college, and I take it out not only to come here for a different kind of Oregon, and we're looking up.

00:00:53:01 - 00:01:18:17

Speaker 3

Then we're going to take care of our. Broke my leg. 37, 41ft. That's true. I sure as hell are you going to go? Yes. Have you tried to get out? You tried to bust the window or something? I'm pretty far off in the ocean, Inspector. You said myself. I calling on Apple Watch Company. Okay. I can't wait to leave anymore.

00:01:18:19 - 00:01:35:04

Speaker 3

Please hurry. I'm hurting real bad. You wanted to help, okay. I didn't tell you how I got here. And you didn't graduate. Okay. Your head of the water.

00:01:35:06 - 00:01:56:17

Speaker 1

You don't need to see with the Apple Watch this was possible, etc.. I'll save you from that. So one of the things I wanted folks to notice when watching this was, these are like, really kind of, drone shots of making the emergency the focus or the acoustic voice. So acoustic voice is a voice without a visual source.

00:01:56:23 - 00:02:29:11

Speaker 1

So you're listening to the dispatcher, you're listening to the person in crisis or under duress. But the other thing that I wanted folks to notice is that there's something about disability awareness that has made its way into my work. A lot of this is very much kind of text to speech or speech to text. It simulates that. But one of the reasons why, as a media scholar, I'm most interested in how we co-create emergency media, which is a term that a doctor Elizabeth Sasser talks about, is because some people have actually wondered, this is how did you get those recordings?

00:02:29:16 - 00:02:52:17

Speaker 1

The minute you call 911, you're actually co-creating emergency media with the dispatcher. I think another thing I wanted to share as well is that there's companies left and right making dashboards for 911 dispatching. As you can see here, there's a car crash. This is kind of a live this is a not live. It's a simulation of kind of a live experience that a dispatcher might experience.

00:02:52:22 - 00:03:16:09

Speaker 1

Now, this might seem, you know, and as the company this is carbine, it might look like rich media and in real time translation, etc.. I kind of wanted to make certain that folks know this. These are out of these aren't out of the box kind of dashboard experiences. These are things that, you know, a.

00:03:16:11 - 00:03:36:14

Speaker 1

Jurisdiction actually has to pay for, like an agency has to pay for. But one of the reasons why I became so fascinated also by emergency media, and this is something Elaine Scary has said in her book, the body and pain is whatever pain achieves, it achieves in part through its unshared ability, and it ensures this unshared ability through its resistance to language.

00:03:36:16 - 00:04:02:17

Speaker 1

I think what people oftentimes think when they're watching a movie, even a game show, believe it or not, you know, you're just like, why didn't you answer this way or do this or that unless you're in a situation yourself? You actually kind of lose that sensibility. I want people to remember that, especially in emergency, crisis and disaster, and we experience all types of pain across the board, whether heartache, physical pain, mental distress, etc..

00:04:02:19 - 00:04:31:00

Speaker 1

But the reason for, you know, Elaine, scary is kind of work. Being so influential is because it's something that I had to really think about when thinking about language. I am someone who is really interested in how generative AI is actually making its way into emergency infrastructure, how a lot of agencies are actually using AI to actually do things like language language detection for callers who are not English

speakers, etc..

00:04:31:02 - 00:04:54:10

Speaker 1

And how do you translate this? This is something that, is actually something that you cannot easily speak or translate pain, that is. Now, I also wanted to mention this kind of trifecta that medical anthropologists Nancy Shepard Hughes and Margaret Locke talk about. It's the physical, the social, the bio political. When we think about this trifecta, we're thinking about the physical.

00:04:54:15 - 00:05:27:04

Speaker 1

We're in Santa Cruz. I am a body here in this space, the social aspect of me, I'm a faculty member here. But the bio political part of this is that I'm queer, I'm disabled, and there are parts of that trifecta that have to make its way that haven't made their way in yet to emergency infrastructure, which I think that collectively, individually, these are things that I hope that we can work on together when thinking about kind of the field and ethnographic research I've been conducting in the past six years.

00:05:27:04 - 00:05:53:20

Speaker 1

One of the conversations I had was actually with someone from it was a supervisor from the San Francisco Department of Emergency Management. Now, I'm actually just curious. This is not something I've typically asked in to an audience, but how many of you have called 911? So a good number of you, but not not many, I am. My wish is that you don't have to, but obviously the infrastructure that is there is there for a reason.

00:05:53:22 - 00:06:15:19

Speaker 1

I'm not sure how many of you know the labor of a dispatcher, and that's something I think is really important, especially when we think about not just the kind of individual insular instance of emergency, but also kind of like thinking about natural disaster and global emergency. But a dispatcher has for San Francisco has within 10s hands for a call.

00:06:15:21 - 00:06:48:18

Speaker 1

There's only 123 operators in San Francisco. They service approximately 842,754 citizens. And this is according to the 2020 census. So there might even be more households than this. That's not very many dispatchers at peak operation. It's about 164 to 180 dispatchers that would actually need to work to be able to not, stress test. An agency and this is a very, densely populated example.

00:06:48:20 - 00:07:08:03

Speaker 1

I have been for the past six years, believe it or not. I read pretty frequently the subreddit 901 dispatchers, because I oftentimes feel that this is the place where I can kind of get a sense of, or the pulse of how

dispatchers actually feel about their occupation, the different systems they're using. That includes how they're feeling about AI.

00:07:08:05 - 00:07:40:23

Speaker 1

I've actually had a, you know, looked at sentiment analysis of this subreddit. I don't think that they're actually scared of AI taking the place of of their role. However, what I think they're fearful of is that public knowledge and education actually is very much lacking across agencies. My focus is primarily the US. I am actually looking at international agencies as well, but it's, if you can imagine, just Santa Cruz alone in San Francisco alone.

00:07:41:01 - 00:07:56:18

Speaker 1

Each agency has really complex systems that they're working with, and a lot of that is also informed by natural disaster, weather conditions, etc. as you can imagine, in the California coast, it's earthquakes and wildfires.

00:07:56:20 - 00:08:20:01

Speaker 1

So I want to talk a little bit about my visit, and I sit along to the what is called Santa Santa Cruz Regional 911. So not only is it Santa Cruz County, it's San Benito, Hollister, etc. I spent eight hours not as a dispatcher, but I put the headset on and I listen to eight hours worth of calls.

00:08:20:03 - 00:08:40:15

Speaker 1

And one of the reasons why I felt that that was important for my own research was because, I've been reading oral histories, I've also been conducting oral histories. And usually when I say that I'm working on a creative project that's a work in progress and name it, that's kind of a personal ask of myself to finish it.

00:08:40:15 - 00:09:07:05

Speaker 1

I am working on a series of artworks or creative works called The Last of the Human Computers, based on 911 dispatching. And the reason why I'm showing this picture is because this is a typical, I guess, cubicle or workstation of a dispatcher. They do have, as you see here, six screens. If you're working fire, you have another screen at the very top, usually to the far left.

00:09:07:07 - 00:09:30:17

Speaker 1

That is the phone, because if you could believe it. Believe it or not, the dispatchers actually have to do phone and radio. So all the way to the far left is, a phone and you can't see it because I'm obviously it's a lot of personal information or information that cannot be revealed to the public. So I took another picture of another workstation.

00:09:30:20 - 00:10:04:06

Speaker 1

And then the middle screens are locators or, you know, geo locating software like ArcGIS. Cetera. ET cetera. You also have if folks are calling in for, you know, criminal activity. You have the they have access to court records, etc. all the way to the far right is all those many buttons that you see that's completely radio dispatch and at the top two screens or, sorry, the top screen, which if you're working fire, there would be two screens.

00:10:04:07 - 00:10:29:07

Speaker 1

It's it's two different maps, one locating the actual emergency and where it's occurring once the operator actually, or the dispatcher actually gets a sense of the address, the location, etc.. And then the other one is a mapping of all of the available fire trucks that could service that that incident, as they call it. And then at the bottom.

00:10:29:07 - 00:10:47:03

Speaker 1

And the reason why I'm describing this is I don't think many people actually know what a dispatch, cubicle or workstation actually looks like and how your 911 call, for those of you that have called 911 actually look like. So now, if we're looking at the actual desk, there are two radios, three mice and one other and one keyboard.

00:10:47:04 - 00:11:10:19

Speaker 1

There is there should be a regular kind of mechanical keyboard in the middle, but all the way to the left. They use a brand of numeric keyboard that is a specific to a phone and radio dispatch, so that they can actually click on and off and up to three voices. Actually, that's what a dispatcher might be listening to.

00:11:10:21 - 00:11:39:12

Speaker 1

Another thing that I wanted to mention is they have a pedal all the way at the bottom, located in front of the chair. It actually helps them access the different lines that they're managing. And some folks, including myself, have have asked them what happens when the internet goes down or what happens in the case of an emergency for the agency, meaning you don't have access to, you know, the monitors and screens, they actually have kits underneath all of the desks, and it's all analog.

00:11:39:18 - 00:11:53:13

Speaker 1

So it goes back to a paper system. They cannot not record incidents. So there are ways to create emergency media no matter what the situation.

00:11:53:15 - 00:12:15:08

Speaker 1

But I also wanted to I feel this is really important to mention is that there are initiatives out there, such as transform 911 out of the University of Chicago that I have found really fascinating and interesting in terms of how we were having a dialog about 911 and emergency infrastructure. And a lot of that is because a lot of people don't actually know how 911 works.

00:12:15:10 - 00:12:34:10

Speaker 1

People will call, they ask, why are you asking me all these questions? They kind of think that, you know, we live in Minority Report. This is why media scholarship for me is really kind of, you know, important because a lot of people's perceptions of how 911 works are based off of television and film media that they see, whether it's on social media, what have you.

00:12:34:12 - 00:13:00:10

Speaker 1

But transform 911 is also trying to how do we allow people to understand citizens, to understand that this isn't law enforcement? We are given a duty as dispatchers, not we, but dispatchers are given a duty to protect in a really different way. But one of the the more distressing things that is challenging for me, that I kind of want to impart in all the research that I've done, is, your worst.

00:13:00:11 - 00:13:22:17

Speaker 1

This is kind of a tagline that's really popular and said, you know, time and time again in dispatching is your worst day is our every day. So if you can imagine kind of the statistics that I gave you earlier. These are individuals that are listening to calls and they have mere seconds to actually address what is happening.

00:13:22:21 - 00:13:54:00

Speaker 1

I think another thing that I wanted to share to is, the old school way of dispatching what was what they found was until medical could get there, because there is fire. The kind of three core for dispatching is, fire, law enforcement and medical. Until medical can actually get to someone in distress. The dispatchers actually giving you the guidance based on, you know, physician and nursing kind of procedures and protocols.

00:13:54:04 - 00:14:19:00

Speaker 1

So until someone gets there, you actually have to pay really close attention. And, to the dispatcher that's actually trying to dispense kind of support for you. And I think the relationship to kind of ecology and climate change and climate justice is, I think a lot of people don't think about these kind of impending emergencies or crises until they're there.

00:14:19:01 - 00:14:46:13

Speaker 1

And I think a lot of the reasons why this has become so important to me is because I want people to be prepared, you know, not just, you know, my my family, my colleagues, my students. I think in large part, I'm thinking about someone like my mom. And I'll I'll end with this. I wanted to kind of I usually start with this for much more like kind of longer form talks.

00:14:46:15 - 00:15:26:14

Speaker 1

This is a text message from my mom's phone on February 9th, 2025. She was in a really traumatic car accident of all places. She was on her way to a funeral. My my my funeral in Southern California. And one of the things that I have been researching this for six years. And it's not that this didn't mean anything, you know, I think it means something different when it happens to you, when you have when you are confronted with crisis or emergency in a way that you cannot deny how the media works, how a lot of what mediates these experiences functions in your own life.

00:15:26:16 - 00:15:54:16

Speaker 1

It says here crash detected S.O.S. Dulce Santos called emergency services from this approximate location after phone detected a crash. You're assuming this message because DOS listed you as an emergency contact. Now, this is an iPhone and iPhone 14. As of the iPhone 14, this was actually a default setting. So the emergency SOS, actually the the Apple just actually defaulted, defaulted it to your phone.

00:15:54:18 - 00:16:23:01

Speaker 1

My mom didn't actually call. That's another thing that I want folks to know. Within 10s of a crash detection and how the kind of geo sensors work in an iPhone and even Android. It's it's kind of a it will actually activate an emergency call out to the local to the most to the closest app. Or you might hear it, I say agency app is public safety answering point.

00:16:23:03 - 00:16:46:03

Speaker 1

But of course, you know, and I wanted to share this and I'm being a bit vulnerable here. I remember that morning the it was a couple hours before and I said, I can't fire, I don't know, Freedom of Information Act. I'm not sure how many of you have fired anything. But I was like, I can't just FOIA a random emergency call.

00:16:46:05 - 00:17:07:11

Speaker 1

And then I get this. And this was I was probably one of the most awful feelings. But the reason why I'm also saying this is, we live in a constant state of emergency. You know, there's emergencies happening all around us, even if we're, you know, here together, you know, talking about different types of ways to engage with art and ecology, etc..

00:17:07:13 - 00:17:27:10

Speaker 1

But, I guess what I'm saying is I want folks to take a little bit more time and understanding, what would you do in a crisis or an emergency? How might it work for you? What are the types of things that actually prohibit some communities from getting care and others not? And yeah, if there are any questions, I think there's about three more minutes.

00:17:27:12 - 00:17:39:13

Speaker 1

I'm more than happy to to answer them. But also, if you want to talk a little bit more about this, I'm, I'm, I welcome email and messages and more than happy to to talk discuss this more.