

MIKE LIVERMORE: Hi. This is Mike Livermore, and with me today is Willis Jenkins, who's the John Allen Hollingsworth professor of ethics and the chair of the Department of Religious Studies at the University of Virginia. His work focuses on the environmental humanities, and he can often be found in transdisciplinary collaborations tackling hard questions related to how humans understand and interact with the natural world. Willis, thanks for joining me today.

WILLIS JENKINS: Mike, it's a pleasure to be here.

MIKE LIVERMORE: Just to get us started, I was curious, like, what brought you to this intersection of religion, ethics, and the environment where you've spent your career kind of thinking about these issues?

WILLIS JENKINS: Yeah, I know, a fair question. And I suppose like many questions that come to mid-career academics who have made kind of a transition, there's a long story behind it. But the short of it is more or less that I trained in religious ethics with a focus on environmental issues in a kind of conventional way-- you know, that is, like, how did a few big Christian traditions reason historically about human environment relations and what kind of implications would that have for contemporary environmental issues?

And then my first job was at-- I was at Yale Divinity School with an appointment also in the forestry school, and I realized I didn't have a lot of really helpful, interesting things to say to the people in the forestry environment school about particular problems. And yet I thought that someone with my training should be able to.

And so, yeah, I really started focusing on just trying to get involved in not just sort of like the cultural translation of issues but really kind of humanistic contribution to how problems are interpreted from the beginning, how to design from the beginning. And coming to UVA and an environmental humanities position has really, really kind of opened that up.

MIKE LIVERMORE: Yeah, that's great, And there's a lot of different ways that I think we could take our conversation. But one thing that just kind of comes to mind that sometimes troubles me when we talk about the humanities is that it strikes me in a weird way of carving up the joints in academia that I'm not sure that historians and philosophers have all that much in common with each other. And we put them under this rubric of the humanities. And do you think that that's a category that's worthwhile, or is it just, like, all other intellectual disciplines that aren't the sciences?

WILLIS JENKINS: Yeah, you know, Andres Clarence, who's an engineer and he's on our environmental resilience Institute, said, you know, I basically think of the university as engineering, and everything else is religious studies, which is his way-- he was joking, of course. But it was also his way of saying, you know, humanities, social sciences, it's all just kind of like squishy non-math is what--

MIKE LIVERMORE: Right, right, non-quantitative disciplines, right?

WILLIS JENKINS: Yeah, yeah, yeah. Yeah, no it's a really good question. And I think especially in this field, where there's sort of an interdisciplinary interpretation of environmental issues and we're trying to think about how to find collaborations of sciences and economics, especially sciences and economics and also engineering and design to some extent, humanities becomes-- arts and humanities becomes kind of a box.

And yeah, I think sort of two ways about it. I mean, I'm speaking directly from the experience of being on the president's panel about how UVA should invest in resilience and sustainability yesterday, and I was the lone humanities guy out of like 20 people. And the questions were coming kind of like what can the humanities be, what should they do.

And on the one hand, I'm really happy to talk about the need for research that is attentive to a wide range of cultural interpretations, that is methodologically imaginative, that can engage the arts and invite public imagination, that kind of thing. But on the other hand, yeah, I mean, I hear your point. I think it's a pretty loose coalition from people who really don't share research methods.

MIKE LIVERMORE: Yeah, and it's funny too. I was thinking about this because also the social science-- I don't think of the social sciences as falling within the rubric of the humanities. I think sometimes it gets put in there. But one thing I think is funny is if you call a social scientist a humanist, they would get very angry, and if you call a humanist a social scientist, they would get very angry. And so I think the fact that they get lumped together, neither one of them likes that. So maybe that's a way of saying that maybe the category doesn't make any sense

WILLIS JENKINS: Yeah, I mean, it may well not. Yeah.

MIKE LIVERMORE: But on the environment, one of the things that is especially fun about your work and some of your recent work especially is trying to make these interdisciplinary, transdisciplinary, cross humanities and sciences collaborations work and generate product and not just be a panel or a talk session but actually create real intellectual contributions and real intellectual progress. And so maybe it's more illuminating to talk about some of these abstract academic issues in the context of real projects that you've worked on. So one that we have chatted about in the past a little bit is this project on water, and this is a huge interdisciplinary group.

It's hugely interdisciplinary. The group is good sized. It's not massive, but it's hugely interdisciplinary in the sense of folks from the hard sciences.

There's a lawyer in the group, economics, engineering, religious studies, and so on. And I was curious just about kind of how that project got started and what the project is about. Let's kind of start with that. It's about water, water rights in general. But what's kind of the specific interdisciplinary, transdisciplinary perspective that you saw was missing and that this group was kind of forged to help address?

WILLIS JENKINS: Yeah, so this group came out of an initiative from UVA's Environmental Resilience Institute that was [INAUDIBLE] broadly themed on water futures. But there was a particular team they wanted to work on water security. And I mean, this will get directly to your question about what do the humanities do. I sit on the ERI board, and I played what was often my role, which was to say, like, well, what's so great about water security?

Like, why not a different concept? Like, why not water justice and why not water sovereignty? Look at all the ways of thinking about water that the discourse of water security excludes. And Karen, the director of the ERI, kind of called me on it.

She's basically like, OK, smarty pants humanities guy. How about you co-direct a team on water security, then? But that does express what my worry was that some of the concepts that organize research, especially environmental change research that can be taken as common sense, have a kind of unreflective, normative frame to them.

And it's not that I'm an ethicist. It's not that I dislike the normative frame. It's that I want there to be responsibility for how the problem is framed right from the beginning.

And then also in this context, it wasn't-- I mean, my stance wasn't that you can't use the phrase water security. But let's ask to what extent can you begin to include some of the cultural valuations of water that have historically been excluded from international water security discourse. And so yeah, we really tried to push the envelope on that.

MIKE LIVERMORE: Yeah, so I mean, in a way, there's almost a kind of a philosophy of science element to some of this stuff. I mean, you get-- I think as a, quote unquote, "humanist" that gets pulled into these conversations, you get asked to play some different roles, again, in part due to the kind of open ended nature of what we mean when we refer to the humanities. And so it's a little bit about questioning concepts almost from a scientific perspective to say, like, are these the right ways of thinking about these problems to make progress on them scientifically, but also normatively, how are we thinking about these issues?

Are there unstated normative assumptions or undefended or undependable, for that matter, normative assumptions? So just to get into the details of this project, what is the concept of water security and how has it been used? Like, what do we mean-- what is meant by that and how has it structured scientific inquiry or kind of policy conversations?

WILLIS JENKINS: Yeah, so actually, we were really fortunate to bring in probably one of the best authorities in the world on the history of the water security concept [INAUDIBLE] Jeremy Schmidt. So he joined the team and really helped sort of frame its significance. But I think just really basically, it would be fair to say that water security has been thought as securing the minimum quantity of water for what humans need, right, in the most efficient way generally. And so there's this kind of constant-- or maybe the main pole in existing water security discourse would be the attention between the efficiency of water distribution versus universality of making sure that every single human's water needs are met.

MIKE LIVERMORE: Got it. So in a way, is it fair to analogize it to a concept like food security?

WILLIS JENKINS: Exactly.

MIKE LIVERMORE: Or even like economic security when we're talking about, yeah, just the idea that there's human needs and what matters is ensuring some stable and broad accessibility to whatever the resource? Energy, security, could be another one.

WILLIS JENKINS: Yeah, completely. Yeah, and so then the other lead on this project is Paolo D'Odorico. He's a hydrologist.

He's a chair of environmental sciences at UC Berkeley. And his work is really about the quantitative hydrology of water security as embodied in food. And so his big point is, like, look.

So much of the water that humans need is not like the water that comes out of the tap or that we need for drinking and bathing. But really, most of the water we use is in food, right? And so his work is really focused around quantifying flows of water that are implicit in food.

MIKE LIVERMORE: Yeah, so just to get into some of this conceptual space. So what is the difference between, say, a concept like water security, which strikes me as deeply normative, really, kind of on its face, but maybe of course having clear scientific or engineering kind of implications?

Because we could talk. We could evaluate a system, a real hydrological system or a real built environment, to ask what are the consequences for water security of this, of x that we're evaluating. How does that differ from using a frame like water justice or water rights in this evaluative posture of kind of taking what we know about the natural world in engineering and science and so forth. And then kind of understanding whether we're making good or bad decisions, which I take to be the evaluative posture?

WILLIS JENKINS: Yeah, I mean, I guess I would put it this way. What we wanted to do was create a quantitative model where it would be possible to visualize what water security looks like under different value regimes. So that is to say, like, OK. If you go all in on water security is being defined by universal human rights, this is what you get.

And maybe the key-- but really, the key thing here was we wanted to find some way of expressing important values for water that I guess you could say care for the water itself. Like, what if the river is sacred, right? Or what if the water has rights of its own, or what if the ecological benefits, services, communities that are sustained by water are seen as not just desirable but let us say, like, foundationally important to a community's identity such that they should be bound up into water security?

How could we express that? And then-- yeah. So I mean, that was, I think, the innovative thing we're trying to do so that you could begin to compare different ideas of water security within the same volumetric framework.

MIKE LIVERMORE: So you could ask. I mean, just a concrete example of where there's different types of interests at play would be something like on the West Coast, there's often conflict between agriculture and, like, endangered species requirements.

WILLIS JENKINS: Exactly, yeah.

MIKE LIVERMORE: And so there's frequently questions about what are the minimum flows necessary in a river or to protect salmon spawning grounds, and the advocates for the endangered species will have one set of water flows that they're going to advocate for, and then the agricultural interests will say, no, we need this water. The salmon don't need that much, or we shouldn't care about the salmon at all. And of course, in the US, there's a legal framework to ensure the minimum water flows that aren't going to jeopardize the species.

But we can ask things like, is this protected, if the salmon have some kind of right, if they have some interest that we ought to respect. What does that look like? And I guess what it sounds like from the project that you're describing is that the goal wasn't to answer those kinds of hard, normative questions but just to say, we can build a model that depending on how you answer those normative questions, then the model can tell you something about what water flows should look like.

**WILLIS
JENKINS:**

Yes, and that was the idea. So it wasn't an optimizing equation. There are equations in there, but they're not optimizing in the sense that if you plug in the values and you get like the best answer.

But it's really if you begin with some articulation of the values that ostensibly inform your notion or a community's notion of water security, this is the kind of volume trade-offs you would get. And I would say-- so this has been kind of framed like what can the humanities bring to environmental change research. But I experience this also as a really salutary challenge because to me, from a more humanities-based approach, because to work with a hydrologist, Paolo, he's so interested, so open to philosophy, really excited to read in environmental ethics.

And so his question was-- it wasn't hard to convince him that hydrology should take account of intrinsic value theories or indigenous studies theories. And his immediate question was like, OK, so what should be our proxy for that, right? Like, how much water flow should we put for appropriately respecting the intrinsic value of a waterway?

And then, yeah, that then is a kind of-- it's forcing a kind of a valuative approach to really think in a quantitative way about how do these values get expressed. And so, of course, we picked a few proxies, you know, like 80% flow, 20% flow. But I think that's the kind of political work that ideally a deliberative watershed community would undertake.

**MIKE
LIVERMORE:**

Right, and one of the things that's also interesting about this I think too is it highlights this intersection of values and science in a way that's very explicit and I think beneficial for that reason. There are other environmental contexts where we kind of subsume the value choices into the scientific inquiry. We kind of pretend like what we're doing is we're just answering a scientific question.

Like, for example, what water flows are necessary to achieve water security? And then we go to a bunch of scientists and say, answer the question for us, please. Tell us, and then we'll develop policies accordingly.

But as you point out, that's a deeply normative question. And so it's kind of almost inappropriate or unfair to kick that to the scientists and expect them to give us an answer. Or at the very least, it puts them in an extremely awkward position because there are these embedded normative questions that we'd be much better served by at least, from a deliberative perspective, by having the science answer in a sense what the science can answer but then being more explicit about how that connects up to these deeper value questions.

Yes, yeah, completely. I always wince in empathy for the scientists when I hear politicians say, well, the science has said x. And so therefore, we must do y, you know? And it's really unfair. Yeah.

Yeah, it's tough, and this comes up in climate debates all the time.

**WILLIS
JENKINS:**

All the time.

MIKE You know, let's just do what the science says. And it's sometimes my friends.

LIVERMORE:

WILLIS Right.

JENKINS:

MIKE Right? And it's frustrating. I think there is a reason why some advocates and politicians are inclined to say things
LIVERMORE: like that, which is they want to make it seem as though what's going on is not a contest of values but is instead just a simple question of fact. So thinking of the context of the water rights research, you could have this really fancy model where everyone kind of agrees on the science, which would be like nirvana in today's political discourse, right?

So we're like, OK, we all agree that this model is an accurate representation of water flows and that kind of thing. But what we really disagree about is the relative value of people's property rights and agricultural interests versus whether the salmon have some interest that we ought to respect in their own right versus traditional Indigenous peoples' relationships to this water. And that's what we really disagree about. Now what do we do?

WILLIS Right, right, right.

JENKINS:

MIKE So what's the answer? Like, what do we do? Like, have we been helped by the model if what we end up ultimately
LIVERMORE: recognizing is that we have deep, maybe insoluble values disagreements?

WILLIS Yeah. Well, so it's a fair question, especially given the state of our current democratic capacity to have
JENKINS: meaningful conversation across significant value differences. But if I can answer from my commitments, I would say I think that that's in the long run better to know where the differences lie rather than kind of obscuring them inside of either an economic model or a scientific model because they're going to come out eventually, right? I think it's better-- I mean, I think it's better.

MIKE Yeah.

LIVERMORE:

WILLIS I would like to think it's better for a pluralist democracy to figure out how to be a democracy amidst deep,
JENKINS: irreconcilable pluralism than to hide its conflicts.

MIKE Yeah, it's interesting. So I mean, I want to agree with you.

LIVERMORE:

WILLIS Yeah, right.

JENKINS:

MIKE But to just play the devil's advocate, you could actually imagine that kind of the argument that runs, well, look.
LIVERMORE: At some level, these are really deep disagreements. And again, kind of as you said, we live in a pluralistic society.

We like that pluralistic society in a sense, right? We certainly like our own rights to decide how to live our lives and what counts for the good life. And we're going to disagree with each other.

There are ways that we can frame questions that turn those disagreements into hot disagreements that get people angry and inflame their kind of identity and affiliation and are oriented towards in-group and outgroup kind of ways of thinking about the world. And then there are ways of frame framing disputes that are jargon-laden and technocratic and difficult to understand. And people just say, eh, that's boring.

And I'm going to go, like, watch sports and hang out with my family. And you disagree with me, but I don't even understand what we're talking about. So let's have a beer.

WILLIS
JENKINS: Yeah. I appreciate-- Mike, I have a lot of sympathy for the technocratic view, yeah. On the other hand, I think I guess I think it can lead them to the kind of alienation that you see around climate, right? Like, a bunch of people are doing some stuff I don't understand to whatever it is-- like, take my freedoms or whatever Americans are saying now.

MIKE
LIVERMORE: Raise my energy prices.

WILLIS
JENKINS: Right.

MIKE
LIVERMORE: I mean, in fairness, it's like, if your energy prices are going to go up, we should probably give you a good reason why that's--

WILLIS
JENKINS: Yeah, yeah, right. And it shouldn't require you to understand an integrated assessment model.

MIKE
LIVERMORE: Probably not. Right, and the trust the experts things, it gets-- yeah, so that's interesting. So the trust the experts thing gets thin when we're talking about real world implications on people's lives. We want to be able to-- but then again, just to, again, continue to play the devil's advocate here, your energy prices are going to go up.

And we could say, well, the reason your energy prices are going to go up is because we've made contestable value judgments about the relative importance of future generations versus current generations, where you sit in society versus where other people sit in society, our responsibilities and rights vis a vis the global community. And we've made those decisions that are deeply value-laden, and that's going to determine how much your energy prices are going to go up or mumbo jumbo, mumbo jumbo, mumbo jumbo. Trust the experts.

Don't worry about it. That's why your energy prices are going to go up. And yeah, I do wonder which one of those ultimately is more conducive to, again, just kind of getting along with each other.

WILLIS
JENKINS: Yeah, yeah. I mean, look. This is not something that I am an expert in, this sort of cultural cognition that-- I mean, I certainly do think-- I mean, yeah, I'm interested. I don't really know which way to go on that. I mean, I'm really interested in that question. I think, again, from my own intellectual commitments, the way I would like to answer is that you hope that people can be motivated by their commitments. Maybe not like 100% but enough that you accept a higher energy bill because you acknowledge that you care for future generations or something like that.

MIKE
LIVERMORE: Right.

WILLIS And I think that that's plausible. I think I'm among those who are skeptical of especially climate policy and I
JENKINS: guess also water policy always being delivered to the public in terms of self-interest. You know, like, this will be better for you because you're going to avoid some really terrible thing or you're going to have a million green jobs or whatever.

And maybe that but also ask people to be who they want to be, right? Like, you want to be-- like, there's incredible bipartisan support about being the kind of people who care for future generations. Like, that's not really a controversial value. It's controversial like what it means, of course. But I would like to think that that's a commitment that could lead to some practical policy implications, including that your gas is more expensive.

MIKE Right. And maybe the thing is that we don't-- I mean, ideally, we wouldn't necessarily have to agree with the
LIVERMORE: choices that are made because we're not going to because we live in a pluralistic democracy. And the chances that my preferred policies are going to be the ones that are adopted are roughly 1 out of 330 million.

WILLIS Right.

JENKINS:

MIKE And so I think the way this is supposed to work is that I'm supposed to accede to the choices that are made and
LIVERMORE: recognize in part because they're our values but in part that are roughly commensurate with my values. I recognize them as the kind of values that people have even if they're not exactly the ones that reflect my relative weighing of different interests. But I recognize that there's a democratic process that we all have a voice in. And ultimately, what comes out of that is a view that-- and I am committed to that democratic process because it respects my voice in some equal way. And I think one of the tricky things these days is that people have questions about that.

WILLIS Yeah. Well-said.

JENKINS:

MIKE Yeah, so then just the other part of this that I was curious to get your thoughts on is, of course, we're talking
LIVERMORE: about sometimes what people refer to as sociological legitimacy, right? Do people actually accept the outputs of a political process? But there's also kind of normative legitimacy. Like, is it actually defensible as a democratic practice to throw mumbo jumbo at people as a way of getting them to be compliant as opposed to explaining the true grounds of our decisions?

WILLIS Yeah. Yeah, you know, so just to refer back to this again, this panel that UVA had yesterday asked a number of us
JENKINS: to reflect on the relation of climate and democracy because it's an area they want to invest in. And so my little team of three people, we basically said, well, it seems like the question here is can democracies survive climate change.

Like-- or maybe to put it better, like, are democratic societies possessed of the capacities to respond well to climate change? Or is it just so overwhelming, the temporality is so misaligned with the temporalities of political processes-- the incentive structure across generations is just so perverse. Whatever it is-- all the things, right?

That democracy is just a really ill equipped for it, and maybe you kind of need the technocratic mumbo jumbo as a way of fudging it. I don't know. I would feel bad if I was making that argument, but I would certainly be open to hearing it.

MIKE And if it's true, it's true, I mean, because that kind of thing is empirical, right?

LIVERMORE:

WILLIS Right, right, right.

JENKINS:

MIKE And we shouldn't just-- and this is a tricky thing is to have our commitments, but we don't want them to-- we

LIVERMORE: don't want to engage in wishful thinking.

WILLIS Yeah.

JENKINS:

MIKE Right, which is tricky.

LIVERMORE:

WILLIS Right.

JENKINS:

MIKE So another really interesting project that you've been engaged in recently is this coastal futures conservatory.

LIVERMORE: And I think of this-- so if the water rights project is about taking, let's say, perspectives drawn from the humanities and using those perspectives to help, I mean, in this project really highlight the underlying normative values that are driving conversations about particular environmental question-- water security, in that case-- and untangle the normative and the empirical and the scientific and the cultural, what I take the Coastal Futures Conservatory is about-- well, you tell me what it's about because it strikes me as a little bit about translation.

It strikes me as a little bit about broadening the techniques of scientific inquiry in a way that's more inclusive. But maybe you could just describe what the project is and then how it relates to this broader science humanities set of issues.

WILLIS Yeah, so coastal futures conservatory is kind of a little UVA startup funded by an internal grant that has been asked to think about integrating arts and humanities into Virginia's really world class coastal research program. So UVA leads an NSF-funded long term ecological research site called the Virginia Coast Reserve along the Eastern shore of Virginia, and it's just a great place to study the ecological dynamics of coastal resilience because it's the largest undisturbed barrier island system in the world and also a place that is experiencing sea level rise at three times the global average. And so you just get lots of dynamics that it's a great laboratory for scientists interested in this.

And so knowing that, wanting to build environmental humanities and do environmental change research generally around UVA, this is a great place to think with, and the staff and the scientists there were really interested. They wanted to know how can we have arts and humanities more involved here. And basically, a lot of conversations with a music professor named Matthew Burton who specializes in eco acoustics, we decided to call our project a conservatory-- you know, a school of music-- and to foreground listening ways in.

And so that means like listening across disciplines and listening across borders but also literally listening. And so one of my favorite examples is we sonify the data sets that are produced by the VCR scientists. So Matthew and his graduate students will take a data set, you know, like on water quality in a particular area and then basically translate that into a sonic signature-- you know, take a huge CSV file and use machines to assign particular sounds to each data point. And then you can listen to it.

And then, of course, depending on your method of eco acoustics-- and Mike, I know more about methods and eco acoustics than I really would have anticipated. But depending on it, then you begin to work with that. You might composed with it or manipulate it in some way. So that it begins to sound a particular way.

And so then when the public-- you know, and I've also had this experience. When you look at a visual graph of temporal data plotted over time, you take it in in an instant, right? Like, it's especially like carbon emissions over 50 years or whatever.

But if you listen to it, you really have to attend to the temporality and to the change in it over time because you're sitting there even if it's just like 30 seconds. Like, you experience that in a certain way. You really have to attend to it.

And I think it invites a different kind of cognition. And so anyway, that's one kind of listening. And then there's other parts, another other number of other components to this conservatory.

But we also kind of commissioned typical humanities-based research from a historian, literary scholars. And then that informs these kind of multidisciplinary performances that Matthew really orchestrates so that an audience can come. And we've had a number of performances. An audience can come and experience a concert, but you know that it's informed by coastal sciences.

It's informed by indigenous studies. It's informed by ethics. And I don't know. I don't have any kind of data on this, but what I imagine that we're doing is that we're inviting a broader range of imaginative cultural response to what we know about rapid coastal change.

MIKE
LIVERMORE: Yeah, it's so interesting. I mean, one distinction I'd be curious to hear your thoughts on with respect to this project is sometimes in these conversations on the humanities and the environment, especially for folks who are new to the idea of thinking about the humanities, they almost can think of the role as being like you would hire a communications expert for.

WILLIS
JENKINS: Yeah.

MIKE
LIVERMORE: It's a way of communicating science to the public. And that's fine. I don't know that humanities scholars are who I would tap for that particular job.

WILLIS
JENKINS: Not always known for being the most accessible [INAUDIBLE].

MIKE
LIVERMORE: Right. I mean, these are people who literally write out what they're going to say before standing up at a podium and reading their essays, right? But what I've thought of as a kind of alternative to that is sophisticated meaning making. It's not about necessarily communicating kind of a pre-generated message and just figuring out how to get that message across. It's this process of meaning making. I'm just curious what you think of that alternative or if you think something slightly adjacent to that or totally different from it.

WILLIS
JENKINS: No, I appreciate that. I really resist the idea that the humanities should be involved in environmental change research to translate to the public. yeah, A, because it's a bad idea, and B, because I hope that we're doing something more creative. And I would say, in this case, I'm saying arts and humanities. We're really foregrounding music as a way in here.

And-- let me give you two examples of how involving the arts and humanities has invited meaning making, as you say. I like that. So one is on the eastern shore, there's a place, a local museum, called the Barrier Island Center that is really devoted to remembering the lost social life of the set of when the barrier Islands off shore were settled. They were settled by settler people after indigenous folks use them through the 19th century up until about 1933 when there was a series of hurricanes.

And they were just like, no, we're leaving. So they left, and then there's this museum that's dedicated to it. And so we, among all these exhibits about what fishing was like and what the hotel was like and so on, we made these sound installations.

So people could come in, and they could pick up headphones, and they would listen to it, yeah, like a sonification of sea level rise over time or something like that right. And then next to it, there was just a very short little placard that explained the science that went into the data that was created and just a note about how the sonification was made. And there's nothing else said, you know?

There's nothing else to be like-- and look, sea level rise is really threatening the Eastern shore, and you need to think about what this community is going to do-- like, no white paper kind of communication. And again, unscientific response here, but first of all, the opening was really well-attended. And there was just like a real excitement, like a buzz.

People put on the headphones, and their eyes would widen. And they would kind of look up and smile. And I don't know what's happening in their mind, but I just think, well, in some way, they are participating in the meaning making of what to make of the science of coastal change in this place. And they are connecting it, right, literally in the place of historical memory of kind of radical social change in response to coastal vulnerability.

And so I just think that's of a higher order. Now, like, the next step, like, yeah, like, I would, if we could keep this going, I would love to then find ways to invite and participate in more community meaning making along those lines. And we've done some things like we invite-- we did like a writing workshop, and there was an artist workshop for local artists to do some stuff with the ghost forest there.

Then we have a-- I should say we have a major indigenous-led indigenous storytelling projects for Indigenous experiences of coastal change. It's kind of extraordinary. So all of that is sort of inviting community meaning making, I'd say.

But then on this other side of how this has changed the way that we researchers at UVA research the coast, so about once a year, we gather all the related researchers, scientists, humanists, and artists. And Matthew the musician, he does a kind of eco acoustics listening workshop. And he makes people go out and take microphones and field recorders and basically undertake meditative listening exercises in place. And the first time we did this, I was really worried.

I just thought like, this project is going to fail right from the beginning because the scientists are going to think, this is exactly what happens when you invite arts and humanities over. Like, you start doing these weird, like, I don't know, like, contemplative listening. Like, this is not research, you know?

But-- so Karen [INAUDIBLE], who's the lead scientist for this place comes back after a half an hour of directly listening, and she says, every single researcher needs to do this exercise. And it was because she thought she would be bored, you know? Like, I work here all the time.

I'm not going to learn anything. And she experienced it differently. She paid attention to different things.

And then, like, we brought back recordings just to explain what we were doing to people at UVA. And one of the oyster reef scientists, Matt [INAUDIBLE], listened to a recording of an oyster reef. And he goes, huh. Like, I bet we could build a way of-- I bet I could answer the questions I have about oyster reef vitality, basically, by some acoustic metrics.

And so we built this-- well, we didn't. But some music grad students and some of Matthew's grad students built an acoustic monitoring thing, and they got some publications out of it about how to-- and it was just, you can't kind of predict that. But it's just when you're invited to attend to something through a different disciplinary lens, it allows new kinds of research questions to open up.

**MIKE
LIVERMORE:** Yeah, that's a great story. And in a way, it's almost like-- I'm trying to think of an analogy, but it's like, we worry about monocropping in agriculture, and one of the ways that we address that is we keep around heritage breeds of various things. And it's almost like one thing you could think of is the humanities as a storehouse of kind of heritage breeds of intellectual inquiry. And occasionally, it's good to just take some of those seeds and throw them out into the more monoculture-ish disciplines and just disrupt them a little bit. And sometimes, good things come out of that.

**WILLIS
JENKINS:** Yeah, that's nicely-- that's a good metaphor, Mike. I'll use that one.

**MIKE
LIVERMORE:** So on this, I mean, I think this notion of coastal change that you've been digging into here-- this is a bit of a left field question, but it's something on my mind recently that you may have some thoughts on from this experience. As climate change sets in, one of the big questions that societies and here in the US, our society, cultures here and then around the world are going to face is this question of retreat. We're going to lose coastal lands.

Coastal lands are going to really radically change. And this is a massive social problem-- a cultural, political, economic-- I mean, this is going to be a very big deal. And we've seen just the leading edge of some of these questions show up after you see a major storm come through.

And then people will talk a little bit about do we rebuild, do we not rebuild, what does that look like, and so on. And I wonder, you know? And what struck me when you were kind of telling the story of the museum is there was a retreat there, right?

There was a group that had a thriving community, it sounds like, and then ultimately decided to leave in the face of environmental risks that they face, environmental vulnerabilities. And there's a relationship between this kind of retreat and remembering. And I'm just wondering if you have any insights from this experience about the broader set of questions of how to manage this, what I take to be just an incredibly difficult set of questions that we're all going to start to really seriously face.

WILLIS
JENKINS:

Yeah, it's a great question, and if I can just answer really generally, I would say it's going to be a huge site that needs really well-informed interpretive research because, I mean, just the amount of cultural memory and loss that is happening already in, I guess, environmentally stressed human migrations is massive. So I mean, that's to put it in negative. There's also incredible new forms of cultural exchange and cultural flows.

So that's going to make a real difference in sort of what ideas and practices and foods, all that stuff, what goes where and then how the places that have been left are remembered. I mean, just think about the repertoire we have of homeland and exile and how it affects our ongoing political life in the United States but in various ways different political lives everywhere. OK, so we're going to have a whole new generation of homeland and exile stories.

We'll have unknown political consequences. So that's really, really broad. But when I think about the question of what's going to happen along the coasts just in the next few decades, I think here's a place in which there needs to be multi-method, humanities-involved research because if you do whatever it is, like saline incursion models or something like that, you can get a sense of, OK, where is the arable land going to retreat to?

And then maybe you can overlay that with an economic model. Like, what's the most efficient way to retreat from these places? But none of that's really going to match up with what people find to be culturally tolerable or the stories that they're going to tell about why they left and what those stories are going to do later. And I can't say that if you involve a humanities researcher that then you can answer those questions, but you can at least begin to let the other forms of research be informed by that.

MIKE
LIVERMORE:

Right, you can start to track it. You can recognize that that's one of the consequences of all of this. Yeah.

WILLIS
JENKINS:

Yeah.

MIKE
LIVERMORE:

Well, to shift gears a little bit and to maybe bring some of the conversation to more of the religious studies side of your work, another really fun, again, interdisciplinary project that we both know folks have been part of is the work that you've done on these sanctuaries or these sacred spaces around the world, which sounds like a lot of fun and also very interesting research. So maybe again, you could kind of introduce what that work is, the sanctuary lab, and what's some of the work that you've done there and maybe how it fits into this broader question about religion and how religious ways of thinking interact with kind of environmental change, climate change, and the like.

WILLIS
JENKINS: Yeah, so Sanctuary Lab, it's another transdisciplinary experiment, and it involves people from arts, sciences, humanities interested in how planetary stresses are interpreted and experienced in places regarded as sacred in some way by some community. And the idea there is that again, big global problems are going to be experienced in particular ways according to different particular inheritances.

And so I'm always kind of looking for a way into that. And one way in is to start with how places that are set apart in the imagination and maybe also in politics as special are interpreted when they begin to change. And so actually, the first place we went to was Yellowstone National Park.

And you might think, wait, Yellowstone? I thought this was a religion project. But it was great.

It was like taking the methods of religious studies to treat Yellowstone as a kind of secular sanctuary, a place that's been sacralized by the American wilderness tradition and its pieties, and that when folks go there, they're often invited to experience the place with that kind of regard, a place that is set apart and where the wilderness sublime can cure your soul and really a place that's, in the American wilderness tradition, a refuge from the rest of society. But now, Yellowstone is like a crucible of climate change in North America because it's one of the places most vulnerable to fire. And we actually talked with a climate modeler of Yellowstone. And he had published research that showed that basically, all of Yellowstone is projected to burn.

MIKE
LIVERMORE: Oh gosh.

WILLIS
JENKINS: And such-- I mean, burn at such a rate that it will not be able to sustain its forest with, I think-- I don't remember that his research but I want to say 50 years.

MIKE
LIVERMORE: Oh wow.

WILLIS
JENKINS: And so he presented this in like an austere, scientific way. But he knew that we were from religious studies or at least the directors were from religious studies. And then he wanted to say what this meant to him. And he started talking about Muir and Emerson and how, I think, destabilizing it was for him to think that this place of pure nature was going to-- was that vulnerable.

MIKE
LIVERMORE: Mm-hmm.

WILLIS
JENKINS: So then the idea-- so then we also took a different research team, including your colleague John Cannon, to Baton a few years ago. And there is a whole different set of inheritances and a whole different set of environmental stresses. And again, the idea was, OK, so here's a Himalayan Buddhist kingdom with a real strong national culture around a form of Tibetan Buddhism and especially a particular tradition of sacred valleys.

So what happens when sacred valleys which are protected with these political protections but also spiritually protected through associations with particular local divinities and these elaborate monastic rituals that maintain spiritual protection of these valleys-- so what happens when those valleys are, for example, vulnerable to glacial outburst floods from melting glaciers? Like, not so much like what happens to the valley but what happens to the tradition of interpreting the valley as sacred and protected?

And that was actually-- of course, it's more complicated, ambivalent, than I can like really express in a concise way now, but the answers lead towards Bhutan's climate policy, which is they present themselves as carbon negative.

They have a massive conservation policy that is rooted in their interpretation of what the Buddhist heritage means for them. And I think they present themselves to the world as a sanctuary that's deserving of international protection. So they're drawing on a religious heritage to kind of craft a place of political-- I don't know, a political identity for them in a world in which climate change is a major flow.

MIKE
LIVERMORE: Yeah, I can imagine that different stories emerging out of this kind of interaction of sacred places and climate change, especially in the Yellowstone case and the tradition of very broadly kind of American wilderness environmentalism, of thinking of these places as, as you say, refuges from city life and from other people. And they're kind of places where people don't go or where the traces of human beings are imperceptible.

WILLIS
JENKINS: Right.

MIKE
LIVERMORE: And climate change obviously disrupts that. There are no places in the world that are free of human traces. And does that, if this is a word, desacrilize the space?

Does that make it less sacred? I mean, certainly, the story that you raise with the climate model are taking-- and it's one thing to say, oh, we'll be inundating the New Jersey shore, and that's really harmful, and it's going to have these negative consequences. And for some people, maybe that is a sufficiently salient example of climate change to be meaningful.

But it's perhaps a different story to talk about wildfires in Yellowstone, a place that's supposed to be free from human influence, although that's, like, absurd. It's a hugely managed space. But in any case, I mean, so it seems like there are lots of complicated dynamics. There's one is that these spaces can be used as, in a sense, highly salient illustrations of the profound changes that are on the horizon. But there's also perhaps a complicated dynamic where some of the meaning is sapped out of these spaces because when we see them embedded in the kind of broader industrial human landscape.

WILLIS
JENKINS: Yes, so actually, something like that dynamic is one that our teams have asked themselves in one way or another. Basically, will places that regard themselves as sacred, as sanctuaries, as they are shaped more and more by big pressures that originate from causes outside of themselves, will their character be maintained? And I think it's especially fraught for the American wilderness tradition, of course, because if you have a tradition, a place is unmarked by humans, and that is also what makes it special, then that's going to make it harder.

I mean, it's going make it harder to incorporate what look like exogenous influences over the constant pervasive hand of humans. But stepping back from the particular anxiety that causes, I think it's just really culturally interesting to mark what kinds of vocabularies of humanity and nature, human natural systems, will come out of that pressure. So Yellowstone is this iconic place for American views of humanity and nature in a way that maybe the Jersey Shore isn't quite.

Everyone around the nation follows its policy on wolves or snowmobiles or whatever because it makes a difference for how we imagine all of our environments. And so it's just to say what is interesting to me about this project is it really focuses in on those real sensitive cultural landscapes because it knows that the kinds of vocabularies and the questions that arise from there are going to be ones by which we interpret the rest of our-- well, not our, but in this case for Americans, the rest of their interactions with the climate change world.

And I would say that something like that is true, although it's different dynamics. They don't have the same wilderness set of human nature binary exclusions. But something like that is true for the Bhutanese in their tradition of the sacred valley, the place that one goes for safety and enlightenment. Yeah.

I mean, I would love it-- in my ideal world, you get great funding and you create a whole set of research teams doing this for UNESCO-recognized sacred sites around the world in part because also, it's a way of tracking these emerging vocabularies by which humans are simultaneously interpreting really rapid global environmental changes but with all these really various cultural repertoires and inheritances. You know, and I think that's something that needs that we kind of need to do better with. So especially like in the big global reports, there's going to be talk about societies and cultural transitions and so on.

But the language is always so austere, and it imagines kind of humans universally interacting with the planet universally. But of course, that's not how it happens. We're all culturally embedded, living in these stories, possessed of our lexicons. And I think if there's one thing the environmental humanities kind of stands for or takes as its task is the need to be able to kind of pay real time attention to this many millions of cultural events that are happening as people just try to interpret these changes with whatever they have at hand.

MIKE Yeah, I mean, this is all fascinating. If there's any donors or NSF program officers listening to this podcast, Willis
LIVERMORE: Jenkins is the guy--

WILLIS There you go.
JENKINS:

MIKE --to be in touch. So I feel like the last question is maybe the most abstract. I just feel like I have to get your
LIVERMORE: thoughts on this while I have you, and I think maybe many folks would be interested in a scholar of environmental ethics and religion and climate change, your thoughts just generally on the political situation in the US and how religion intersects with politics and with the environment, especially in the partisan dynamic, the incredibly unhelpful partisan dynamic that we have in the US today.

You know, obviously, we've been talking about the intersection of religion and climate change and the environment in a fairly nuanced way and in a very kind of religiously pluralistic kind of mindset, but I'm just curious just generally if you've learned anything in your work that illuminates some of the ways that religion in public discourse in the United States and how it interacts with other affinities, geographic, partisan, and so on to produce this really unhelpful dynamic, and is there any way that we can do anything about it?

WILLIS Yeah, wow. OK, well, how long do we have, Mike?
JENKINS:

MIKE Five minutes.
LIVERMORE:

WILLIS

Yeah, OK, right. Yeah, well, OK. So I would say, yeah, this is an active site of research.

JENKINS:

I mean, there's kind of a generation of not very helpful research that tried to answer the question of something like does being religious make you anti-environmental. And that wasn't helpful for a number of reasons, including that researchers weren't always really clear what they meant by religious. But just recently, there's been better research that's come out around religion and climate change.

As I follow it, a couple of findings are, one, it's complicated to disentangle religious and political identity because in this country, our polarization has involved the polarization of religious identities, right? But I think one thing we can learn is-- well, let me just mention a story and then say something about what I think is going on.

So back in 2006, there was an evangelical declaration about climate change, and it was signed by everybody, right? Presidents of colleges and all the big pastors. People were on TV.

I think Falwell was on TV with Al Sharpton. And then just 10 years later in 2016, Trump withdraws from Paris, and there's silence you know? Nothing, right?

At the same time, back in 2006, there was this global assembly of evangelical Christians that-- they're called the Lausanne Conference, I think-- that described climate change as one of the two gravest moral problems of our time, the other being human poverty. So formally, it looks like it's a problem, and then 10 years later in the United States, it doesn't.

So what happens? And sociologists are kind of uncovering the research. There's a couple of things that are happening.

I mean, one is there's pretty intentional-- what you want to say? Like, culture jamming, right? Like, so especially white evangelicals were targeted by internal and external campaigns that attempted to kind of shame them into re-solidifying their alliance with I guess you'd say the Republican Party.

I think the Republican Party was worried that if it lost its evangelical base that it would really lose its power base. And climate change was seen as a wedge issue. And so you saw, like, these really kind of, like, clearly very well-funded programs that went after key pastors, basically saying that they were unintentionally losing their Christian identity.

They were becoming pagan. They were giving their kids over to being pagan. And so, OK, so maybe that worked.

Maybe there are other things at play. Maybe it had nothing to do with it. But what you do see is that it's not right to say that evangelicals don't care about climate change.

What it is right to say is that white evangelicals who are US citizens are much less likely to care about climate change, but Black and Brown evangelicals, much higher climate concern. Meanwhile, Catholics, which on the whole have a relatively higher concern towards climate change, also split by race. So white Catholics, much more likely to be skeptical, whereas Hispanic Catholics are not only more likely, they're more likely than the American public in general, right?

MIKE

Sure.

LIVERMORE:

WILLIS
JENKINS: So what role is religion playing? Like, what role is evangelical Christian beliefs playing there? I would be open to a hypothesis that would say, well, it's not much because it looks like race and political affiliation is doing more work.

And there is some more nuanced work inside of that, like about how religious affiliation affects how intensely and how the climate views are held and how open they might be to change. There's also really interesting international work. And this is really thin.

I mean, so much of the religion and climate change at work is focused on the United States, and there just isn't as much everywhere else, including the global south. But there is some really interesting work that needs to be done comparatively.

So just for example, in Brazil, evangelicals are way more likely to be climate concerned than others. And the reason for that, of course, is that evangelicals in Brazil, they just occupy a totally different political space than evangelicals in the United States do.

So that's just to say-- OK, I just went on for a little bit there. But religion does a lot of different kinds of really particular work in different contexts. And you really have to have smart research to attend to it. And here's a place where we just need so much more great social science to understand because it clearly is playing a huge role.

MIKE
LIVERMORE: Yeah, it's super interesting. I think the two things there that really just strike me-- the depth of the complexity of the situation but also that there's other tails wagging this dog. And maybe just out kind of a cultural proclivity, we tend to look to religion to provide explanations when maybe that's, at least in certain contexts, not really the main driver. But nevertheless, still, there's hugely important issues around, at the very least, how people understand these issues and talk about them and think about them.

WILLIS
JENKINS: Yeah, like we just said, sometimes I think religion may not be a huge causal explanation, but it is often the explanation that people will give. It's what they draw on to tell their story about why they did what they did.

MIKE
LIVERMORE: Yeah.

WILLIS
JENKINS: Yeah.

MIKE
LIVERMORE: That's very interesting. Well, thanks so much for taking the time to chat with me today, Willis. This has been a super interesting conversation.

WILLIS
JENKINS: Mike, it was really fun. Thank you.