

**Lisa:** Hi, I'm Lisa Herandez—

**Lizzy:** I'm Lizzy Ghedi-Ehrlich.

**Lisa:** —and we are your hosts for Scholar Strategy Networks, No Jargon. Each month we will discuss an American policy problem with one of the nation's top researchers without jargon.

**Lizzy:** Lisa, how's the weather where you are?

**Lisa:** Hot, humid, and we are just getting ready for it to get hotter and more humid and rainy and stormy, and for those who are not fully aware yet, I live in Florida, so I am bracing myself for all that is to come within the weather and climate this season, especially with all the hurricanes that we're likely to be facing.

**Lizzy:** Yes, it is the start of hurricane season and I hope you're battening down the hatches for that. And of course, that's not a new thing. Climate change has been happening for so long, but the weather as it stands has certainly been happening for longer. But things are really different now and I feel like people who don't live in the southeast that get regular hurricanes, people who don't live in the Midwest that get things like tornadoes, California with fires, I feel like we're all actually becoming a lot more aware of extreme weather and it feels like we're becoming people whose patterns and lives are actually much more effectively changed by it than back when it used to be just, an idea or the subject of small talk. We moved into big talk basically.

**Lisa:** Absolutely. I mean, it's hard to not think about it when the sun is beaming down on you at all times. So I was really excited to get to talk a little bit about things that directly affect me and tons of other people in the country, especially when it comes to climate change, hurricanes, and all the expected disasters.

So for this month's episode, I spoke to Elizabeth Fussell, a professor of population studies and environment and society at Brown University. Her research focuses on environmental drivers of migration and social inequalities in migration, health, and other post-disaster outcomes. Here's our conversation.

**Lisa:** Professor Fussell, thank you for coming on No Jargon.

**Elizabeth:** Hi. Thank you for having me.

**Lisa:** So today we are going to be talking about a topic that has been making a lot of headlines lately with this summer in full swing. We are experiencing pretty extreme weather, including this relentless heat wave that many of us are dealing with. And of course, hurricane season is upon us, which is a good time to think about the impact that these disasters can have on people, especially as they get more intense and common thanks to climate change.

So you've been studying the effects of these types of disasters for a while now and next year, we'll mark 20 years since Hurricane Katrina. I read that you were at Tulane University in New Orleans when Katrina hit, and as someone who has researched the effects of extreme weather events, I'm curious to hear about your experience living in New Orleans during that time.

**Elizabeth:** I wanna just start off by saying I did not study to become a disaster researcher. When I was in graduate school, my interest was in demography and particularly migration. I had been living in New Orleans for about four years when Hurricane Katrina happened on August 29th, 2005.

My experience of the disaster was as a resident of the city, I had no prior knowledge of what to expect based on academic studies. As a migration researcher, I became quickly fascinated by the way in which people were choosing to evacuate and then what their destinations were, how long they stayed in different places, how they made decisions about where they were gonna go.

And of course, I was doing this with my family as well. I had a 1-year-old child at the time. My husband and I were really concerned with her health and wellbeing and where we could live, where she would be the most protected from any of the sort of hazards that persist in the wake of a disaster.

So that was my crash course in how to become a disaster researcher. I was fascinated by everything I was seeing and learning, both my personal experience as

well as that of my friends and networks. Then I got drawn into several projects that involved qualitative research, doing interviews with people who were part of a pre-disaster study of community college retention and graduation among low income mothers who were attending Delgado Community College. That study was transformational for my understanding of the range of experiences that people had during Hurricane Katrina, because while my family and friends were mostly academics and who were relatively privileged, in terms of their housing and their social networks and the resources that they had available for them to cope with the disaster impacts and all of the sort of implications of not being able to move back to New Orleans for an extended period of time.

The women in this study had a really different set of resources to cope with the disaster impacts. And so by studying them and talking to them I just got a whole different perspective on how the disaster affected different people in different circumstances, and that was very important for understanding the differences in social vulnerability to disasters.

**Lisa:** So I want us to dig a little bit deeper. Could you tell me more about how Hurricane Katrina played out in the lives of individuals living in New Orleans and how people made decisions either as individuals or in groups or even at the community or government level to deal with this disaster?

**Elizabeth:** You can think about before the hurricane, there are all the ways in which people knew it was coming, knew they had to prepare for it, and certainly worked in groups to be prepared.

And so that often meant working together to board up your house or to make sure that everybody in your network had a ride out of town, a place to go, or if they couldn't leave town, a place to go that was safe. And in New Orleans, because it's a below sea level city, a lot of people knew the risk of flooding.

And so they could look for places to shelter in New Orleans, often buildings that had a second story so that they could be above the flood waters if that occurred. While people ultimately were responsible for their own decisions, there was a lot of information and assistance being exchanged during that time. The government

can give out, in the pre-disaster period, warnings, and they did, the mayor declared a mandatory evacuation, so that's a really important form of risk communication, of telling people that they need to prepare for this event. And then in the post-disaster period, the government's main role is going to be about providing information where to go, what kind of assistance you're eligible for.

FEMA does have a set of practices for each stage to communicate and provide assistance, because of the nature of a disaster, it is very difficult to organize people and coordinate that response. During Hurricane Katrina in particular, coordination of all of the different units that can provide assistance was extremely challenging.

That was in the emergency period and then in the post emergency period there's a whole other set of practices and policies that go into operation. And of course there's also limited resources and so sometimes there's provisioning that happens. That means some people get resources first or more easily than others.

**Lisa:** So you have obviously dedicated a lot of your research to understanding the impacts of that disaster and how it all played out on the ground. And as I mentioned, next year marks two decades since Hurricane Katrina hit. So I'm curious to know what really strikes you the most now, nearly 20 years later? What is something that still sticks with you after all of this time?

**Elizabeth:** Honestly, the most impactful lesson I've learned from Hurricane Katrina is how the legacy of structural racism in the United States and in New Orleans in particular, played out at every stage of the disaster, whether it was the pre-disaster period, the emergency period, or the recovery period. New Orleans continues to be a majority black city, and I was just really struck by how that racial dividing line persisted throughout the event and the recovery.

**Lisa:** And can you say more about how Hurricane Katrina revealed some of these deeply rooted racial disparities in New Orleans?

**Elizabeth:** So there are many ways. I talked about the legacy of racism, for example, in the neighborhoods in which people lived, that was probably the biggest predictor of how badly damaged your house was gonna be, because in New

Orleans racial residential segregation often correlated with land elevation such that the neighborhoods where white residents had settled tended to be the higher elevation areas of the city, what we call the “sliver along the river”, which is where the French Quarter is, it's where two lane is, it's where the St. Charles Streetcar line runs and that high elevation natural levee is where all of the oldest settlements were in New Orleans.

They continue to be some of the more high value properties in the city and the ones that the tourists are interested in seeing. So people might be familiar with that. As you go to the center of the city a lot of the land is lower. It slopes down as it goes toward Lake Pontchartrain, and that land was often very swampy, but then filled in as development moved out away from the older parts of the city.

Nevertheless, it tended to be lower lying, and there were some neighborhoods that were majority black and zoned in an earlier period to be black neighborhoods where the land was much lower. So when the levees broke and the flood waters came into the city, those low elevation. Neighborhoods tended to be, to experience higher flood depths and therefore more destruction, more displacement of the residents. So that's the way in which the historical legacy of, of structural racism just manifested in the disaster event itself.

**Lisa:** And what about after the disaster? Did you see any of these racial disparities playing out in the response or recovery efforts following Katrina?

**Elizabeth:** So disaster recovery relies on the Stafford Act, which says that the federal government will distribute resources to help people return to their pre-disaster condition, and that sounds like a very fair policy, except that when you consider what I just said about that inequality and exposure to the flood waters in New Orleans, it doesn't address the fact that it's going to take a lot more resources to return people in those more heavily damaged neighborhoods to their pre-disaster condition than it will in those higher elevation neighborhoods where people were more advantaged. And so the road home policy that Louisiana implemented with federal money gave people enough money to repair their home, or they capped that money at the value of their home before the disaster. And so whichever was the, the lower amount was the amount of the recovery grant.

And what that meant is for people whose homes were heavily damaged, they could ask for the maximum amount, which would be the rebuilding of their home but based on its pre-disaster value. But if its pre-disaster value was very low because they lived in a neighborhood that had been historically marginalized and had lower property values. They could only ask for the value of that home based on that sort of lower market value, but that home would cost the same amount to be repaired regardless of what neighborhood it was in.

So what that turned out to mean is that people whose homes had a lower value because of racial residential segregation were not gonna be eligible for the same amount of money as those who had a similar home, but in a higher value, in a neighborhood with higher property values. So that was a way in which the pre-disaster disparities were reproduced even with this policy that sounded very fair, that people would be restored to their pre-disaster condition.

**Lisa:** We know that hurricanes are getting more frequent, they're getting stronger because of climate change, and there are definitely areas like here in Florida where I live that are more heavily impacted by hurricanes. I think a common idea is that people will have to move in order to avoid these disasters. What does your research tell us about all of that?

**Elizabeth:** Well one of the things we know about environmental drivers of migration is that people who experience a destructive weather event like a hurricane or a flood want to protect the kinds of assets that they have in their community, whether that's their home, their job, their kids, their friendships, their church, their healthcare providers. They don't wanna lose all of that.

So if their home is flooded and they really can't rebuild, they're probably going to move, not very far away, they're gonna look for a place nearby because they don't wanna lose all those other things that they've created in their community that they value.

And so migration after environmental events tends to be a pretty short distance. And they might just move temporarily if they feel like they can rebuild their home. And so migration in response to disasters that destroy buildings tend to be short

distance, short duration. I don't think we're gonna see waves of people leaving the coastlines of the United States and moving to the upper Midwest to get away from hurricanes. That's the kind of disastrous scenario that you're only gonna see in Hollywood.

The bias in the way we design, whether it's insurance policies or FEMA policies that are meant to restore people to pre-disaster conditions or even just zoning rules at a municipal level, those policies are really designed with the idea that these are rare events, and so the likelihood that some sort of disaster will strike in the same place twice is gonna be pretty small, so let's just protect what we have and rebuild it.

I think that logic is certainly being questioned and the insurance companies are really taking the lead on trying to think about policies of managed retreat where they want to think about how we can move people out of harm's way when we know that these events are not gonna be rare any longer.

We can't predict exactly where they're gonna hit, but we know that they're more likely to happen. So how do we move people out of harm's way? That is a question that can be answered either through market forces where you just rely on, say, insurance companies saying, we're not gonna issue homeowners insurance policies here anymore, and effectively anybody who wants to live there, well, you have to absorb all of the risk. That's a market driven approach to moving away from hazards, just putting all of the risk on the individuals.

The approach that we prefer right now is to have FEMA intervene and provide guidance. And for example, there are programs in FEMA about repeat hazard properties where if a property has been destroyed multiple times, they say, let's do a buyout, clearly this is not a safe place to live. And so there are those buyout programs that municipalities can apply for.

But what tends to happen with the buyout programs is that the most advantaged communities are the ones who are best positioned to even apply for that money and then implement the programs to help homeowners who are pretty savvy and can figure out how to get a buyout.

So the buyout programs have another kind of problem with them as well, where they're not uniformly implemented to take all of the people who are at risk out of harm's way. So those are kind of the two ways to go, either a government led program or a market led program.

We're on the cusp of figuring out how to develop this kind of program to move people systematically out of harm's way. I think that no matter what program we come up with, whether it's government led or market led, the migration away from risk will be an inland migration, but people will try to preserve their communities and so they're not gonna move very far.

**Lisa:** Well, that gets me thinking about one area where I would imagine we really need a government led approach which is when entire communities or even cities may not be viable places to live anymore because they are so heavily affected by natural disasters, especially those near the coast with rising sea levels.

Is this something that's already happening and, and what is the role of government in this case?

**Elizabeth:** Well right now there are two examples that are often referenced when we talk about managed retreat. And one is the Il de Jean Charles in Louisiana, which is an island that's been losing land for decades. And the people who live there are mainly tribal people who have wanted to stay on their land.

They're very attached to the place, but they understand that the land loss is so overwhelming that there's a need to move. The second place is similar, it's also tribal land in Alaska, in communities that were settled on the coast by the federal government. Their practice was to move through different hunting areas, according to the seasons.

And in those two instances. They were granted money from the federal government to relocate away from these hazardous lands. It has been a very complicated process of negotiating with the state where to find the land to move to, how to build the homes, how property titles would be worked out and to this day, they really haven't moved yet.

And so the idea of doing that on an even larger scale with cities seems unimaginable given all of the challenges that we've already confronted with these two examples. There have been other instances of managed retreat of small towns mostly in river areas like in South Dakota where rivers have routinely flooded towns and communities have moved short distances outside of the floodplain.

It's costly and it seems less and less possible as property values just continue to go up, but I don't really know what that will look like, which is one of the reasons why I think this is probably gonna play out more through, at a small scale, through individual decisions to move slightly inland, but to not really give up any land except by force, by sea level rises.

**Lisa:** Well, I want us to close things out by discussing some of the takeaways from your research. It's clear that there are many things on the horizon for us to anticipate or keep in mind when it comes to hurricane seasons and climate change. So what are your thoughts or worries about the upcoming hurricane season?

Is there anything you think we can do to prepare for the possibility of more frequent and even more powerful disasters?

**Elizabeth:** I think we can focus on what we learned from Puerto Rico where we saw the way in which deferred maintenance of the electric grid for so many decades had made it extremely vulnerable to the impacts of Hurricane Maria. Important lesson to learn is that when the electric grid goes down it goes down for months and in some places as long as a year and they continue to experience blackouts in Puerto Rico on a regular basis because the electric grid just simply has not been restored. Take a lesson from that and think about our failure to invest in the resilience of basic infrastructure everywhere in the United States.

And of course, Puerto Rico is a U.S. territory, so it's part of the United States, but our failure to invest in that basic infrastructure poses a real hazard to human health and wellbeing. Because so many people are interested in the bottom line, it poses a hazard to our economy. And so we can't neglect those investments in the built environment, which make all communities more resilient to climate hazards.

**Lisa:** Of course, and thank you for sharing those insights. I can definitely relate to those struggles of going through hurricanes in Puerto Rico and Florida having family in those areas and having lived there myself. So it's really important to keep in mind those terrifying effects that climate change can bring upon communities, and we should really take those lessons to heart, and spread awareness everywhere to help these generations avoid the worst consequences of climate disaster.

So we really appreciate your expertise. Thank you so much for being here today and sharing that with us.

**Elizabeth:** Thank you, Lisa. I really enjoyed it.

**Lisa:** And thanks for listening. For more on Professor Fussell's work, check out our show notes at [scholars.org/nojargon](https://scholars.org/nojargon). No Jargon is the podcast of the Scholar Strategy Network, a nationwide organization that connects journalists, policy makers, and civic leaders with America's top researchers to improve policy and strengthen democracy.

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