

***Women Inspire lecture, Provost Risa Palm
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Associate Provost Kavita Pandit: Good afternoon and welcome to Women Inspire. I'm Kavita Pandit for those of you who don't know me. I'm the associate provost for faculty affairs and it's a real honor for me to introduce today's speaker, Provost Risa Palm. I'd like to give you some background and keep it short at the same time. Risa is an urban geographer who specializes in natural hazards, extreme events that cause harm to humans. She's widely recognized as the leading authority in this field and you can quickly see why.

She's authored 11 books and monographs that have been published in different university presses. She's published in all the major geography journals and interdisciplinary journals in her field. She's served on numerous academic panels and committees at the National Science foundation and the National Academy of Sciences. She's the past president of the American Association of Geographers which is the largest scholarly association in the world with over 12,000 members. Battling Risa's stellar academic career is her equally stellar administrative career which includes senior administrative positions at University of Colorado, University of North Carolina at Chapel Hill, Louisiana State University, and the State University of New York System. She came to Georgia State as Provost in 2009.

I first met Risa as a fellow geographer almost 15 years ago when I was attending CHAIRS orientation that was organized by the American Association of geographers and Risa was one of the panelists invited to speak to us. I still recall one of the pieces of advice she gave us at that time. She told us to "never lose touch with our academic selves and to remain engaged academically, through teaching, research towards our disciplinary society. She herself models her own advice. She has remained engaged throughout her career. Last year, she and a collaborator published a paper in the flagship journal of our discipline and I understand that they have at least two papers that are currently in review. On a personal note, Risa Palm is married to David Greenland who is a professor of climatology and in the audience today. David, wave your hand. They have one son, Dr. John Greenland who is a professor of medicine at the University of California, San Francisco and two grandchildren. In her ample free time, Risa plays baroque music on the harpsicord. So please join me in welcoming Provost Risa Palm to the podium.

Provost Risa Palm: Kavita that was more than kind. Thank you very much. I hate to see people standing in the back. Like church, there are some seats in the front row.

[laughter]

Provost: So, what I would like to talk to you about today is a topic that shouldn't be controversial. It should not be a controversy at all. It's climate change and I want to talk to you a little about the ideology that relates to climate change. Climate change is having a visible effect. We can see it. We have an increase in the frequency of storms, coastal flooding, and places that have never been flooded before are now being regularly flooded. We have an increase in the frequency of drought and wildfire. We know that our ocean waters are getting warmer and what that means is that when a hurricane or typhoon goes through, it strengthens the typhoon or hurricane and we are seeing damage from these very strong storms. We also know that the sea level is rising. Why is it rising? Well, in the very northern and southern latitudes, there is a great deal of warming going on. If you look at this map you can see the former boundary of sea ice in 1979 in red and where it is now. In other words, the polar ice caps are

melting and that adds water to the ocean which makes the sea level rise. We are seeing in numerous cities regular flooding. This is, I'm assuming, the king tide in Miami.

Climate change is also not only about flooding, it's about drought as well. As the air gets warmer, in the left diagram, although it rains, there's more evaporation and more water transferring going back into the atmosphere, reducing the amount of water available. Reducing, on the right side, the sources of ground water. People mine this ground water and use it for a variety of things. If we look at this in the United States, we can see huge areas in the U.S. that are projected to have continued or increasing amounts of drought. We also can tell that climate change related droughts are already occurring. There are so many examples of this. I think we've heard about Cape Town running out of water on a particular date. There are just so many examples of this and what happens is that people who can no longer farm are driven off the land. They have to try to find places where they can survive or try to deal with the small amount of water left.

So, it is having a visible affect but there are many who doubt that it is happening and if we doubt that it's happening, we don't have to do anything about it. So, this doubt justifies doing anything about climate change. Why do people doubt? There are three studies. The first study talks about what causes Americans to change their opinions about climate change. The second study takes an international approach to the question. How do climate change attitudes vary internationally? And then third, is there anything we can do?

The first study was about who becomes doubtful. I want to remind you that there are two ways to do a survey. To do a survey of people, you run data and look at the correlation of what is related to what and you try to match the characteristics of people who felt a specific way. The second way is you look at the same people over a period of time, and we were lucky to have a data set like this. We were using paneled data from the CCES which is the Cooperative Congressional Election Study. It's a study of about 55,000 people and its ran by Harvard University. They took a panel of the 55,000 and surveyed them in 2010 and 2014 and of those people, about 1/3 of them changed their opinion over that period of time. They became either more concerned or less concerned.

Previous research had looked at now how people changed but how they are at a particular time, cross sectional research. They found that there were several things that seemed to affect the opinions about climate change. One is, the more you know about climate change the more you think it exists. Secondly, climate change was more believable if people believed they could do something about it. Gender also had an effect. Women were more likely to believe in climate change than men. Political orientation, income, and religion were also found to affect opinions about climate change. Also, whether or not you had an experience with climate change, whether personal or indirect, was determined to have an affect on opinions as well. So, we looked at this panel and we asked them, "From what you know about climate change, which of the following statements comes closest to your opinion:

1. It's not occurring
2. It's exaggerated- no action is needed
3. We don't know enough
4. There's some evidence that it is occurring
5. It has absolutely been established and there is action that needs to be taken

So that was what we were looking at. How did people's views shift amongst those answers? Do those things that predict attitudes about climate change also predict change in attitudes about climate change? So, we looked at age. Supposedly older people are less concerned with climate change than younger people. We looked at variables of the areas where our responders lived. Did they have warm winters and summers? Did they have droughts? Did they have disasters that caused injuries or property damages? We looked at gender and race. Whites typically have a less concerned opinion about climate change than others. Were they republicans or democrats? Where they interested in public affairs or news? Their religion and the importance of religion to them were things we wanted to know and then the interaction between the variables. So, what did we get as the answer?

Let's look at the ones that are not crossed off. What was related to change then was this relative importance of the environment and the economy. If they viewed the environment as more important than the economy, they tended to come to more of a belief about climate change. If they were more liberal, they tended to change their view to become even more concerned about climate change. Republicans tended to become less concerned about climate change while Democrats became more concerned. We found political ideology, party affiliation, and interest in news and public affairs and what happened was, for Republicans, the more information and the more interest in public affairs, the more skeptical became.

For Democrats, the more information and the more interest in public affairs, the more concerned they became. So, the same information had the opposite effect based on where you were and what affiliation you had. The explanations for this are very complex but I want to point out one of those explanations and that is there has been an effort to try and reduce the amount of certainty that people believe that they have about climate change. So "Merchants of Doubt" is a good example and Michael Ericson can talk to us about merchants of doubt and tobacco use. It's the same folks who are talking about climate change and introducing doubt into the science.

So, the question is whether or not these findings in the United States would lead to the same predictors in other countries? Does this work for other countries? Here we used another source for information: the PEW Research Center's Global Attitudes Spring 2015 Survey. They asked about 1000 people in 40 countries about their attitudes and these are the countries that they happened to survey. We found that countries vary tremendously in whether they view climate change as a serious problem. We looked at the variables used as predictors in the United States and came up with a new variable: belief in democratic principle. What we found, probably not surprising, was a huge amount of inconsistency from one country to another in trying to predict attitudes about climate change.

In the United States political ideology and party affiliation was very predictive. We found that conservatives in the United States, Australia, and Germany are more likely to doubt the seriousness of climate change. But in the other countries, the political affiliations don't work. Men are more likely to doubt the seriousness of climate change but this didn't work in the other countries. Pew was asking, "How strongly do you believe in free elections, freedom of religion, equality for women, freedom of speech and press, and free internet access?" Those of you who have been to China will know exactly what I'm talking about when I say free internet access. There are some sites that you do not have access to in China. So, we were able to group these things together. We were calling them "individual rights" or "democratic principles" and that was the one that was the greatest predictor across the countries. We don't know how to explain this. So, what we conclude from this is that political partisan divide does not

work universally. There is a consistent relationship with this new thing “democratic principles” and we’re going to have to try and figure out what that means. Maybe I need some lawyers to work with me.

Variables like gender, religion and income, work in some places and don’t work in other places. It really depends because they’re very culturally specific. So, you can conclude that the model that works in the United States is not universal.

People have said to me at the end of these lectures, “Isn’t this all depressing? What are you going to do?” So, there’s been research to look at how messages are framed. If we frame messages in different ways, can we get different results from people? So, with Toby Bullston and Justin Kingslin, we did a pilot survey. Of that pilot survey, there were only 729 respondents. We used M-turk, which you know is the Amazon Mechanical Turk [website] where people are paid almost nothing to do internet surveys. In a control group, we didn’t give them any information about climate change. There were three test groups. The first group was given a text. The second group were given a text plus an animated map of Boston. The third group was given a text plus an animated map of Miami.

This is a summary of the text: “The Earth’s polar ice is melting faster than climate scientists had thought. This melting could cause major flooding in coastal cities. Even smaller amounts of sea rise could result in the loss of beach.” It was a little longer than that but that is essentially what it said. We showed them an animated map showing the current coastline and then what it would look like with 7 feet of sea rise. For those of you who know Boston, you can see that although Cambridge mass is flooded, very seriously, Harvard is ok. You can see that Logan Airport isn’t very usable after this happens. On the Miami map, Miami Beach has turned into an island.

So, what were the effects? We looked at a couple of them but I’m only going to tell you about two of them. One was, “How concerned are you about the effects of rising seas on coastal communities?” For the Democrats, if we had the text and the Boston map, there concern was increased. If we gave Republicans the text and the Miami map, there concern was increased. For independents, text alone and text with the Boston map increased their concern. So, that’s something.

We also looked at is climate change actually occurring. Is climate change actually occurring? Those respondents that had text and animated maps of Boston and Miami, said yes. It had an impact on Democrats and Independents but no impact on Republicans. So, what do we conclude? Most of the people in the world believe that this is a serious problem. Most Americans believe that climate change is a serious problem but a distinct and vocal minority in the United States do not and they are in political power. But there is hope.

Let’s think about those who reject the idea of climate change. These are the people who are going to be affected by changes in their wealth. Let’s say that home loans will no longer be available in certain areas. If home loan will no longer be available in an area that was flooded, that will send a message. If house prices fall in areas that are susceptible to flooding, the government doesn’t have to do anything. Mortgage insurance is sold when you don’t really qualify for the loan and the bank wants to make sure you’re going to repay the loan. If mortgage insurance was required for these areas, it would send a message. If you were a lender, would you make a 30-year loan on this property? Where every summer it looks like this? Would you?

Something very interesting is going on. There is a non-profit organization, a 501(c)3 organization, based in New York City that started putting up ads. If you go to Zillow and pulled up Miami Beach, among the houses listed you will find this one. "Hurricane season is over, but this area is still at risk of flooding. Learn of the risk by clicking here." And if you click, you might get this ad: "Flooding season is here. As sea levels rise, so does our risk. Visit Flood IQ." Just imagine you put up a listing like this and this is what is added to the listing: "Flooding hurts home value. Know before you buy." Would you pay attention?

So, their spending a lot of money doing this. So, this property is a 1 bedroom, 2 bath condo and it's only \$800,000.00. So, this is what you would get for a category 3 hurricane in Florida. Sea levels are increasing the hurricane risk and lowering the property's value. Sea levels will increase by 5.6 inches in the next 15 years. Flood waters could cover 30% of this property by 2032 and 100% of the roads. This is what you get when you go to Flood IQ and type in a particular address.

As we are going forward in our research, we are interested in two things: the impact of direct disclosure on housing market and the impact of information framing. We do really want to look at this because we want to respond as a society before its too late. I want to thank my faculty colleagues Greg Lewis and Toby Bolsen and my graduate students, Bo Feng and Justin Kingsland for their work on this and I am so grateful for you all coming out and listening to me talk. Thank you very much.

[applause]

Pandit: We have plenty time for the Q&A so let's open it up.

Audience Member: Thank you so much for that. I was born and raised in Florida and my whole family lives there and every time I go home I'm surprised about how people still deny it even though it's in their faces. So if you had one quick thing I could tell them without being called a conspiracy theory what would it be?

Provost: Well I think I would direct them to the Flood IQ website. The interesting thing about the creators of this website is that they are marketers. They had been hired by a Republican group to try to increase awareness about the sea rise levels. They don't use the words "climate change" or "solar energy" so they're ok. They are aimed at the Republican market.

Audience Member: Of course you couldn't have studied those under 18, but yet we're seeing significant shifts in the mindsets of that age group. Do you predict similar characteristics from that age group going forward or do you see a change in the next generation?

Provost: I believe we like to look at the next generation and say that things will get better because it's a new generation but when people get older, you see how they change overtime. I had a professor that used to say, "Young people soon become old."

Audience Member: I'm trying to dig out the root causes in the discrepancies between science and attitudes and I keep going back to a colleague's work that says, "You have to kill the effect as opposed to type issues." Have you thought about that in terms of climate change?

Provost: The affect – it can have to do with as simple a thing as "is climate change bad or good." Two things that I've heard: One is if you live in Buffalo, you would like to have Miami Beach property without moving to Miami Beach so climate change, in that case, would be good. Yes, effect has very much

affected the ways in which people view these things positively or not. Toby, do you want to add on to this?

Toby Bolsen: All information is effect-related. We emotionally react before we even process things and those emotions can affect how we cognitively process things. To me, a lot of this goes back to directional motivational reasoning, the idea that we identify with political parties and different groups and that identification can cause us to cognitively respond in ways that makes us dismiss those arguments and maybe even move in the opposite direction. Finding ways to overcome that is really the next step that we should take in regard to stopping climate change.

- Transcription by [Kiana Colquitt](#), Graduate Administrative Assistant (2018-19), Office of the Provost