



Plenary lecture: Eating our way through the anthropocene: the challenges, risks and ethics of actions

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Q: You asked “how do we model the unknown or the shocks to food systems”, but my question is “how do you measure this?” When we start to make changes, we need measurements to confirm that our cause is the cause of the effect. At some point we have enough modeling. The issue that I have with modeling research and many of the reports that you mentioned is that they are based on assumptions or average amounts that are then multiplied through the models. My fear is that you have situations where policy actions can be taken, but there is no measurement and therefore no accountability for failure to correct because of wrong actions. I would like your thoughts on how we put things in motion and start to measure changes so we know if we are doing good or not. My second question is related to the population increase and how we are going to feed 10–15 billion people. You touched on this, but do we need 10–15 billion people? I don't see anyone even touching this and yet this seems to be a driving issue. Whatever kind of agriculture we have, there is a demand behind it. I would like your thoughts behind that.

R [JF]: I completely agree with you on measurement, I think modeling only goes so far. It is filled with assumptions. Modeling is a useful exercise and it is important for future studies, but we need hard evidence around interventions and their impacts. Throughout international development we have seen so many issues about what we thought was a good deed that ended up having significant side effects or harmful outcomes. That's changing though. We are seeing a lot more on the ground life cycle assessments and things that are trying to put numbers to impacts around the environment. The models complement what we are starting to see on the ground. I agree with you, the measurement is key. The nutritional studies looking at the impacts of certain foods is a contentious space and highly debated. The EAT-Lancet working group was led by Walter Willet at Harvard who has a certain way of looking at data, which may not agree with how other nutrition scientists look at data and what stands up as the rigors of assessment, impact, and cause and effect. It's a great point. Regarding your question on population growth, no one really talks about it. The biggest impact an individual can make on greenhouse gas is having one less child. The second is less trans-Atlantic flights. Recycling is much lower on the list. Having less children is a very sensitive issue for some. You quickly get

into rights, so it's a big issue. There is the one child policy in China, which is a whole other set of ethical issues. However, some people argue that China would have gone towards fertility rate of about one child anyway. The world is plateauing, but there are still places like Nigeria and Pakistan that have high fertility rates, but it is coming down. As we move from agrarian societies to urbanites, you naturally see a downward shift in fertility rates. In agrarian societies, children are very valued and they contribute to their wealth. Not many people want to talk about family planning but there are groups that do talk about it. For example, the United Nations Development Program (UNDP) is going to have a big report on food security and the population. It's the first time the food security and nutrition communities are coming together with family planning communities. The Gates foundation is thinking a lot about this too. Melinda Gates is pushing for every grant to have an element of family planning or reproductive health in it. We are starting to see a little bit of change.

Q: It seems like so many of the projections of what would be needed to correct problems leads us to a more uniform diet. Seemingly there is one optimal way to go, but we have learned many times, many ways, that the more unified we get, the more risk it poses. When you do get unanticipated bumps in the road, you have less diversity to buffer it. Is that worked into the modeling?

R [JF]: For the EAT-Lancet, it was thought that diet and cultural traditions would differ depending on where you are. The foods change depending on culture and tradition, but that prescriptive pattern to the point of grams per food that was listed in the report was so contentious. That is why Italy really did not like the report and made a big stance with the World Health Organization to not support it because it really undermined traditions and diversity within traditions. The EAT-Lancet does not argue for a monotonous diet or that everyone should eat whole grains only. There is a prescriptive nature to these diets. The World Health Organization has never had a prescription for the whole diet in regards to grams per food, with the exception a few things like fruits and vegetables and saturated fat, because it is too contentious.

Q: I think that one of the problems of the world is that the idea of responsible prosperity does not seem to be universal. I could only find one American president that ever used the term “responsible

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prosperity.” How do you recognize that they have to be responsible in pursuit of prosperity and consumption? Everyone in the world would be protected if women produce wealth and by the way we consume it. How do you get that in a result?

R [JF]: That is a great question that I can't answer. There's a right to food in the United Nations (UN), but it's not an indoctrinate right like the right to child protection and other human rights. There is a right to food mandate, but it is not an official UN human right. That's problem number one, that the right to food has never been recognized as a human right. The second problem that has been debated for the last seven years is that there is not a definition of a sustainable diet that the UN recognizes. I was just at a UN regional conference and there is a lot of debate about what a sustainable diet is. If the UN can't come up with a definition for a sustainable diet that the countries of the UN agree on, that's a big problem. There is no accountability for countries to say that they agree with that definition and that the governments will ensure the citizens follow that sustainable diet. If you can't even come up with an agreed definition, it becomes very problematic. The UN is a bit riddled around these issues on food. The Committee on Food Security is a mandate that's meant to strengthen accountability in the food security space and it's very weak. It just underwent a significant external evaluation and it was considered ineffective. If you can't get the UN to be effect on this, it makes it much easier for member states to not commit to any kind of UN doctrines. You sit in these meetings and the US will fundamentally disagree with some of these issues. I find it incredibly frustrating for countries to commit and take actions on these issues.

Q: What is some advice you would give to a young person who might seem overwhelmed by the scale of the issue? Also, a lot of people will take a stance on that they are an American so they can do what they want. At what point does it not apply anymore and at what point do governments have to force change?

R [JF]: I think the Greta Thunberg effect is significant. There's a bunch of young climate activists which reminds me of the late 60's of the youth movement from Vietnam. That was so powerful in the 60's because they had one focus and they had a mandatory draft. There was something very powerful and personal about that got a lot of activists moving. I feel that all of the youth marching for the climate around the world are in a similar situation. They have one cause, it's very serious and they know that time is running out. For you, get out on the streets, don't go to school on Friday (for walk-out for climate change)! There's a decade of action left, after that the earth's systems really start to take over. It's too late for humans to really make big changes. The earth's systems will start to warm themselves. I think a lot of young people start to recognize that this is their future. Should you save for retirement account, will you even be around? This is a time for you to be active. Get all of your friends and everyone who believes in the cause for your future because we have failed you completely.

After the EAT-Lancet came out, there was a lot of stuff on Twitter about people who eat a Paleo diet, which is a meat heavy diet, saying

“we've never felt better, how dare you tell us we can't eat meat?” There has to be a point where the “I” becomes the “We”. When does a person realize that they are a global citizen, and the actions of what they eat actually do impact other people? People haven't resonated with that. What they buy might impact someone else, or what they eat might have impacts on the climate and that's going to impact someone else. It's hard to get your head around that. We live in a society where we are very inward. I think we need to start thinking about ourselves as global citizens, particularly when it comes to food. When that happens, there's something that clicks for people. You have to get out of the self and think about the world in a bigger way.

Q: I think the problem is that the American way of life thrives on the destruction of the environment, so we all have to get used to the idea that this American way of life may not be the way of life in order to have a future. There may not be an America to have an American way of life in if we don't change.

Q: A lot of people are very disconnected in where their food comes from. A lot of young people are getting very involved in these issues. However, I know some young people who are very aware of the climate change and are supportive of doing actions against climate change, but I can't get them to recycle or eat less meat. I think it's something that's engrained in our society. Is this something we can guilt trip people into? Are we being ethical by forcing people into something or is this something that we need governments to institute a policy on? We are always going to have people who disagree and who aren't going to want to make the change because it affects how their lives are lived and they can't think beyond themselves.

R [JF]: I definitely think that we need government to guide the way, whether it is regulation or taxes or mass media campaigns. However I think there is something really effective about nudging, or making things very easy for people. I lived in Rome and they made it very easy for people to compost. They gave everyone a basket to have in their kitchen for compost and picked it up every week. They made it so easy that we hardly threw anything out. In Washington D.C., there's no regular compost program so we don't compost. You would have to go to the farmers market once a month when the compost guys are there. It's challenging. So we composted in Italy because it was easy to do, but not in Washington D.C. Sometimes the shaming, blaming, and guilt tripping doesn't really work. It needs to be easy for people in their lives. That is the whole point of the impossible burger, or beyond burger. It is plant based and it tries to look, smell, and taste like beef. It is not too much of a shift. The nudging and making things easier so switching to a more environmentally healthy alternative is less of a behavior shift for people will really make a difference.

Q: Something we see a lot of is local governments doing the composting or city governments recycling. Is this something the government can step into and tax companies who don't recycle or who don't compost within the building?

R [JF]: Penalizing is very effective.