

# ANTHROPOGENIC NETWORKS

AN INTERVIEW WITH DR. JEFFREY JOHNSON

**Q: Can you start by telling us a little bit about yourself and your research?**

“I got my PhD at UC Irvine, and I did my dissertation in Bristle Bay, Alaska. I worked at a fish camp for 2 years—2 salmon seasons—and I did an ethnography on the salmon fish culture. I worked as a carpenter fixing their boats for these 2 seasons.

“I studied market relationships and how it influences dynamics. After my dissertation, I worked at a marine institute in North Carolina where I...spent many years studying issues related to fishing and fishing management. I had to understand their cultural perceptions, either good or bad perceptions about fish, to make a marketing campaign.[Using] cognitive anthropology in products and marketing is a unique application that can change people’s behaviors.

“[I look at] social-ecological systems, food networks, and networking methods for looking at food webs. [This allows us to] link human networks to

food web networks. If there is a decline of species in food webs, how does that impact fishermen’s behaviors? What are the ripple effects between fishermen’s behaviors from one area to another?”

**Q: What is your background, and how did that lead to your interest in biological and marine sciences?**

“I was an engineering major, but due to the engineering market [at the time] it didn’t seem like a good job at that point, and so I took an anthropology culture and language class, and I changed my major to anthropology. I got asked as an undergraduate if I would be interested in getting a Ph.D. at Irvine, and I’d always been interested in the marine environment. There were job openings at the marine institute in North Carolina, which maintained my interest in doing marine things. I then worked in the Duke marine labs. [I have a] love of the water. I’m a surfer, so I always thought that if I am going to have a job, I wanted to do one that would keep me near the water.”

**Q: How has an interdisciplinary approach helped you as an anthropologist?**

“I’m interdisciplinary, and most issues are dominated by anthropologists. We made it clear that we don’t manage fish, we manage people. Most problems in marine issues don’t get regulated by managing fish, you have to know about the people, because that’s the thing you are affecting. Anthropology is in the [new] bill itself [from] 1976: you have to have a social anthropologist on staff. You have to understand the human dimension. I helped pave the way [for this bill] alongside my colleagues, to show how human effort [impacted this issue].”



**Q: Are biologists or ecologists typically surprised when you join the research team?**

“Because I did (social) network analysis, I was lucky enough to work with someone who did species networks. The mathematical foundations are all similar, so we could talk about it. Most complex problems require an interdisciplinary team. [Most issues are] a combination of all those things. I did food web modeling, and for many years biologists ignored humans in the [practice of] food web modeling. But we eat things. Now, we are including humans in the food web, and incorporating humans in the food web becomes more challenging, but we need to do it for it to be more realistic.”

**Q: Can you explain what a network model is?**

“A network is a relationship between one item (a node) and another item (a node)—a dyadic connection between two things. Networks can be represented as matrices, and we can look at their characteristics or the characteristics of the nodes. Maybe some outcomes lead to better outcomes. Cohesive networks versus divisive networks leads to happier groups, [and cohesive groups are] much better than multiple cliques that are battling one another. A network has properties, and those properties have implications, [regardless of] whether that is [referring to] proteins or humans.”

**Q: Are there other ways you can apply network models to future projects?**

“When we are studying migration and climate drivers of migration, we look at migration networks... and [we ask:] is it conflicts that drive people or climate variables that drive people, like food scarcity or water scarcity, [or] political things like economics, instability, or democracy? The relationship between these different entities—the nodes—can be viewed as a network system.

“As we move to social media, we don’t have social connections the way we used to, which leads to division and lack of trust. There are connection bubbles where people have [social] connections [in these spaces] but no connections outside of them. We are declining in our connections, and those declines are not good. They lead to divisions, distrust... [even] willingness to allow someone to be a dictator. In our own country, we are very much in a period of division and not connection..even among people who we think shouldn’t lose connection. These are the things that are separating people or pulling people apart. What we want to do is come together, not divide.”

**Q: The theme of this issue is “Cosmosis”, which broadly explores human perspectives on the universe, but especially focuses on themes of connection, communication, togetherness, and perspective. Can you speak on how this theme relates to your work, and what that term first brings to your mind?**

“One of the classes I want to teach is Interstellar Migration and Human Experience. I was funded by people studying astronauts, and [that leads me to ask questions like]: What is going to happen to people when we go to the stars? What is going to happen to us culturally, linguistically, physically, biologically? What does it mean to be human when we go into space?”

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