

### Lesley Newson and Peter Richerson with David Sloan Wilson, Part Three

**David Sloan Wilson:** I think the next chapters is, as you know, the thinking on major evolutionary transitions, including biological transitions, such as the eukaryotic cell, and multicellularity, is kind of dialectic between cooperation and information. With an increase in the scale of cooperation, there needs to be also an increase in the scale of information, everything that that represents. In the case of human evolution, this is where cultural revolution comes in big time. This is also where we think about human society at the scale of not just a small group but what we call tribes.

For example, the individuals sharing a language. This as being a pool for information storage and transmission, that might among other things, explain the distinction between anatomically modern humans and culturally modern humans. I know you've thought a lot about that. Let's talk about the relationship between information and cooperation, and the increase in the scale of both. Especially with cultural evolution and human societies becoming larger and larger. Starting with tribal scale, which somehow knit together the actual small groups of people that were with each other at any particular time. Pete, do you want to go first on that one?

**Peter Richerson:** Sure, if you like. A number of years ago, Rob and I wrote a paper on why possibly language evolved, or how possibly language evolved. There are two interesting features of language, from an evolutionary point of view. One is the thing you pointed to, was the tribal aspect of it. Tribal cooperation is based around a common language, typically. The other interesting thing is, why don't we just have one language? Why do we have this plethora of languages? Our speculation was that it's important not to listen to some other people. Particularly people from different tribes, who may have completely different ideas about how to solve games of coordination and cooperation. If you imitate the social mores of your neighboring tribe, they're liable to conflict with the social mores of your tribe.

You'll get all scrambled up and crossways with your fellow tribesmen. On the one hand, as we've discussed already, having a wide social network and lots of communication with other people, is critical to having complex cultural adaptations. On the other hand, not communicating with people, who have different cultural adaptations, may be a real problem. Rob and I wrote a theoretical paper, a long time ago now, on why you shouldn't listen to your neighbors if you're on an ecological gradient. We imagined that some people are farmers, and some people are cattle keepers, and they're on a gradient of aridity. Wherever you are, there's an appropriate mixture of cattle-raising and horticulture that is optimal. You don't want to imitate your neighbors, who are living in a drier or wetter environment, with a different mix of cows and farming.

**DSW:** When I learned that there's actually some languages that are not just a matter of isolation by distance. There's people that mingle with each other. There are multi-languages, and they remain separate languages, despite the fact people are actually even intermarrying among those languages, those languages remain separate. I was amazed by that, because I always thought it was just matter of just isolation by distance, but this made something much more complicated about language. Even people that mingled with each other might have separate languages, which speaks to the thing that you're talking about.

**PR:** People strategize over these cultural boundaries. In addition to language, of course there is dress, and dialect, and diet, and then a bunch of other symbolic differences between groups. Generically, Rob and I speak of these symbolically marked social boundaries. People deploy these extremely strategically, even within societies. I worked for the EPA for a while. The EPA has its own private jargon for a whole bunch of things. You can't interact with EPA until you learn their jargon. It's annoying as hell. College professors have an annoying bunch of symbolic markers. I run into this in scientific meetings sometimes, because there are always a few non-academics that drift into these meetings. Typically, they complain

that they're frozen out. As soon as somebody detects they're not a card-carrying academic, they turn their back on them. They're just rude.

**Lesley Newson:** This makes me want to ask, David and Alan, how they intend to get over this problem of, even if we have Google translate, allowing people from different cultures to share information? How is it going to be possible? Especially when we see now that our close relatives sometimes just doesn't seem to be on the same planet as us, when it comes to believing in global warming, or believing in vaccination, or democracy. How do you see us getting over this hump that we've suddenly found ourselves at the bottom of?

**DSW:** We could turn this into an important part of our conversation. Human society has always been fission–fusion. People have always participated in many different types of groups. Each type of group called for certain norms, and appropriate behaviors, and so on and so forth. Damned if we're not so good at this, as a species, that not only are we capable of living in cooperative groups, we're capable of living in many of them, recognizing the context, and adopting the right behaviors for each one. Erving Goffman, the old sociologist, was one of the people who really accentuated that. I still have a memory from his book, 'The Presentation of Self in Everyday Life'.

For his first his thesis, he studied a small hotel in the Shetland Islands. He'd noticed that the waiters would go back and forth, from the kitchen to the dining room, the kitchen to the dining room. They would have their waiter's persona in the dining room, and then in the kitchen, they'd make fun of the very clients they were being deferential to. It was just a back and forth through the doors. They would be able to do that. We're all good at that.

**LN:** Can I just say, I think there's variation in everything, and I think that some people are better at it than others.

**DSW:** Yup. Yup, of course.

**LN:** Partly for genetic reasons, and partly for cultural reasons.

**DSW:** Yup, absolutely. Absolutely. What that means, in a modern context, is you can turn that to your advantage. You can bring people together that are different. They're not on the same page, none of that, but you could actually cause that to happen by focusing attention asking, "Why are we all working together? What's valuable about it?" So on and so forth. That's what Elinor Ostrom's first core design principle is; a strong sense of identity and purpose. Then you could build in other things, which are basically anti-cheater devices. Monitoring, equitable decision-making, all of these things. What you're doing, basically, it's like a flash group. You're creating the group right then and there, and because we're such geniuses at operating in multiple groups contexts, you could actually do that. If it's a fulfilling group, then you can build upon it.

So it's in that sense that what we're discovering scientifically about our social abilities, and especially all mediated through culture, is something that could be turned into a practical change method. We could use that to manage the cultural evolutionary process.

Okay, so one way to think about cooperation is still quite individualistic. We think of individuals cooperating, but remaining individuals in their own mind and thought processes. Then we can think about cognition itself has becoming a group process, something like a group mind. That sounds like science fiction, until you start to study the social insects. We have wonderful work, by people like Tom Seeley and Deborah Gordon, in which really the idea of the individual as being a bit more like a neuron than a decision-making unit in its own right, is actually very well documented. In the early days of social psychology, as you know, it was more customary to think that way.

The last 50 years has been an age of individualism, methodological individualism in the social sciences, but it's coming back. I have a paper here, a psychological review paper, by Gariy Shteynberg, and others,

'Shared worlds and shared minds: A theory of collective learning and a psychology of common knowledge', which basically talks about all forms of cognition. Perception, memory, decision-making, all of these things, which we axiomatically think of as our individualistic processes. Well, no, not at all. Even at the smaller group level, these things are really collective.

I'd like to have your thoughts on this idea of collective intelligence, group mind. First at the small scale, something that basically evolved as part of the package of human cognition, and then we can expand it, to technology of course, to talk about global brain, and things like that. What that might mean. But first at the small-scale. So do you think about kind of collective intelligence in this way? Have you done much thinking about that, Lesley first and then Peter?

**LN:** Well, I tried to use a story in our book to help people understand how having, even a million and a half years ago, having a collective consciousness, could be really practically useful. So it was talk, we were talking about how a group of humans had to go out and be a group. And in that way, they were able to fight off scary animals. Like what happened in our story is that there were three hyenas who brought down a buffalo and they were standing on it.

And the early humans needed to get some of that meat. And so they needed to scare the hyenas off, and the hyenas were much bigger than they were, but by working as a group all shouting together, all having confidence in themselves as not a bunch of individuals, but as a giant, noisy, confident, big animal. As long as they kept that in their mind that they were that together, that they could scare off these large hyenas. I mean, of course we have no idea if this happened a million and a half years ago, but we can easily see how it would have been useful. And so go from that to lots of other things. But that ability would have been useful for us and remains useful for us.

**DSW:** Great. Thank you. Peter?

**PR:** Well, on the cognitive side, Rob and I think of human groups as a problem-solving collective via the creation of culture. So if each of us had to create our culture for ourselves, it would be an impossible task. Learning is expensive. So what we do in effect is share out the task of learning among all of us. Everybody's trying to learn. And if I make a small improvement in the mouse trap, I can communicate that to the rest of my group, and someone else in turn can make another modification that improves it. So each of us does a little bit of work in creating and learning, but we share it. And so the otherwise impossible task of creating a complicated technology or a complicated social organization is a shared task.

So the idea of calling this collective consciousness or something like that, if that term appeals to you, I'm happy with that. But it seems to me that the concrete aspect of it is that the task of innovation and curation of ideas is a shared task operating through our extensive social networks and through time. So we inherit the culture of our ancestors and often make little improvements on it and transmit those improvements.

Now, a second thing that I think is important, that's the sort of the cognitive side, if you want. On the emotional side, people form attachments to the social groups that they belong to. I think you've alluded to that, David. There's this field of social psychology called social identity theory. And the thrust of it is that our own private identities are in part social. We are emotionally the groups that we belong to. You see this in phenomena like sports fandom. I mean, it's pretty crazy, but so professional sports are in the business of selling a tribal identity to you.

If you buy into being a fan of a particular pro sports team, I mean, it's emotionally salient to lots of people. Rob, for example, was a 49ers football fan because his father took him to games when he was a kid and he got into it really early. And in the heyday of the 49ers, he could barely watch a 49ers football game live because he was so emotionally upset when they lost. Of course, he was emotionally thrilled

when they won, but there was this social bond and with a host of other fans that was completely impersonal.

So you get the phenomenon of tailgating parties on the parking lots of the stadium where people literally collect, or they collect in the stadium itself to cheer their team on. It's a sort of an ersatz tribal identity that's cleverly peddled to sports fans by entrepreneurs who stand to make a lot of money out of your desire to belong to a tribe.

**LN:** Do you think this is a modern phenomenon? Because we don't have such a strong identity nowadays because we're always moving around and meeting different people that we're kind of so desperate to fall in love, that we're quite vulnerable to joining other groups or do you think this is something that was always the case? I don't know.

**PR:** Well, I think that the tribal identities were the primitive, or original form of this, and in modern societies, tribes themselves have gone away, but we have all of these quasi-tribal systems. And I think as David said, we can belong to several of these. You can be a 49ers football fan and a patron of the arts and an anthropologist. You can belong to, a Democrat or a Republican, and you can belong to and identify with, I don't know if it's an unlimited number of groups, but certainly multiple groups.

**DSW:** Well, the whole origin of sports in Greece, for example, was another one of these deliberate constructions in order to actually stitch together cooperation to the larger scale that you'd be fielding sports teams rather than warring with each other and so on. So I think that it plays a role in social physiology. The tribe becomes actually a part of something larger and the competition takes a benign form and so on and so forth. So there's much of interest to be said there.