

SCIENCE OF THE NOOSPHERE

Josiah Ober

with

David Sloan Wilson

David Sloan Wilson: So, Josh, I'm so happy to be talking with you. We already have a long print conversation and podcast on this topic. So, you are a Greek scholar, classic scholar, and political scientist. I've learned so much from you about ancient Greece, from an evolutionary perspective. And this project centers about the concept of organism and society as an organism. And I wanted to ask you, I think, two questions. One is the degree to which the Greek city-states were kind of an organism, and also how that was understood by the people at that time, the whole metaphor of society as an organism, of course, was present in people's minds, such as Aristotle and so on. So not only did the Greek city-states qualify as an organism, in ways that we'll get to, but also that's how people were thinking of it. So, could you comment on that?

Josiah Ober: I think the interesting thing about Greek city-states is, first, these were indeed pretty tight collections of substantial numbers of individuals, anywhere from a few thousand to a few hundred thousand individuals in a given city-state in an ecology of city-states. So, by the time we're at the age of Plato or Aristotle, there's something like a thousand of these around the Mediterranean. So in some ways, like the ant colonies that Deborah Gordon studies, what we have is these individual groups, which are cohesive, they act cohesively as, in some ways, quasi-organisms in an ecology of similar, as it were, quasi-organisms, with which they both compete and cooperate. We have, I think the key way of thinking about what goes on within the city-state, as well as between city-states, is the management of cooperation in the face of conflict.

DSW: Right. So, in strictly biological terms, what we have here is what would we call a meta-population. We have a population of populations. You just said there were nearly a thousand, and that they're competing, they're in some sense replacing each other, and they're certainly trading information extensively, and they have a subsistence ecology. So, that was very easy for me, with my ecological background, to appreciate what you were writing, as definitely a multi-level evolutionary process. Evolutionary change, including cultural change, could take place within anyone of these polities, and did, including of the disruptive variety, and I think that we could focus on that, but also extensively taking place between these polities. So, to what extent were the people at the time self-aware of this, and thinking of their polis as organisms?

JO: So, Aristotle probably is our best evidence for this. He's very self-conscious about the relationship between human systems of organization, and other biological systems. So famously, Aristotle says that humans are political animals. And he uses as the example of other political animals: Ants and bees. He doesn't think that we're genetically related to them in a way that would be closer than to, say, other mammalian species, but he does think that our mode of interaction is meaningfully analogous to what they're doing. So the way in which Aristotle thinks about organizing the animal world is, in the first instance, between animals that he calls social, as opposed to sporadic, that is: Animals that live just one off, like bumblebees or carpenter bees or something, and then animals that live in colonies and in groups. And then he has a secondary division in which he divides the sociable ones into ones that are political and ones that are not political.

The political ones create something that is of value to the commonality. Whereas the not political ones are meant to be like antelope in a herd or something, that aren't doing anything together, although they live together and benefit from living together, but they don't create honey or the kind of things that

humans create together. So, he thinks that humans are like ants or bees that do, in fact, create this thing in common. And they can only reach...now here he gets beyond or outside of a contemporary science, because he imagines that we, through living together in these groups, achieve our final end, our telos, so he's a very systematically teleological kind of thinker. He imagines that the city state is the proper natural environment for humans just as the hive would be for bees or the nest is for ants. And he supposes we can't achieve the capacity that we have as the kind of organisms, individually, that we are outside of that, that any human who could flourish outside of a state, he imagined, would either be less than a human or more than a human, a beast or a God.

So, that if we are to be the creatures that we are, we must do it within these organized systems, for which he thinks we have a natural tendency. The trick is, however, unlike the honeybees or unlike the ants, we don't always look towards the good of the whole. We have the capacity to aim at our own individual good or own family good or only factions.

DSW: So, he was really aware of basically the tension between within group processes and between group processes.

JO: This is, if you look at Aristotle's politics, this great work, that really is the driving idea, is that: Yes, humans are naturally sociable. They are sociable, aiming at this life together to create something together, but they also have this capacity to aim at their own advantage. Managing that becomes the whole work of politics.

DSW: I think the reason that this is so relevant to the human energy project and Teilhard is that the way I see what took place back then was a miniature version of what the project is of the worldwide Noosphere, and so on, is the deliberate creation of an organism-like entity, at the planetary scale in our case, but what was taking place back then was exactly that in miniature, but for the city-state. And they succeeded to a degree. And so what does democracy have to do with it? Because this is the cradle, a cradle, of democratic governance. So why is democracy a very important part of this story?

JO: Yeah. So the question then, once you have these humans who are, naturally, for Aristotle, living in these states is: How are they going to organize themselves? And he supposes there are several ways they can do it. One, under a master, to have a king. One, under a small coalition, an oligarchy. And the third way is that you have self-government by the residents, or at least the citizen residents of the city-state, and that's democracy. The trick here, I think, is that, and here Aristotle gets into difficulties, but we don't have to worry about his difficulties, but the logic of his humans being, by nature, political animals, suggest that we all have this tendency to be sociable, and furthermore, to use our natural capacities of speech and reason towards these prosocial ends, and to do so at the highest level, the level that's closest to the divine, he would suppose.

So, that sounds ultimately like a democracy, all of us aiming at something together using speech, using reason, putting together what we know into some prosocial end. So, by that reasoning, the states that are democratic should do well because they ultimately maximally use human capacity. And interestingly enough, they do seem to do well. But, in order to do that, it's necessary to solve these large scale collective action problems. Because as soon as you don't have a boss telling you what to do, you have to find some way to organize decision-making in a distributive process that answers to the environmental challenges. For example, the Persian empire is coming, trying to take you over, the environmental challenge is surviving in that environment. So, that's really the interesting story, I think, about democracy in the Greek world is that it actually did turn out to be an effective form of human organization. And in fact, seems to have, over time, been the most successful form of organization, at the city-state level anyway, in that democracies tended to replace oligarchies or tyrannies over time and to become more prevalent over time.

DSW: Although they were overtaken by empire at some point, and declined and so on. So, was there a recognition that the smaller social unit, what they call the deme of about 150 males, citizen males, was in some sense, a kind of a natural unit, and that for the democracy to become larger, then some kind of construction was required? Was there an appreciation of that?

JO: Yeah. We look at the origins of formal democracy, in Athens especially, where we can really trace this in detail. The key breakthrough that allows democracy to work in a larger city-state, a city-state with tens of thousands of citizens, is that recognition that the smaller units, demes, are in fact microcosms of the larger unit. So we tend to, anglicize the Greek word demos to deme meaning a village or a neighborhood that is a subunit of the larger city-state. But it's exactly the same word that the Athenians, or all the other Greeks, used for the citizen body. So the demos of Athens is the citizens of Athens. Whereas the polis of Athens, the city-state of Athens, was made up of about 139 demoi. So, you have the people and the peoples and you're using the same word in Greek for both these units. It was very self-conscious what's happening here, and very clearly thought of these smaller units as being in some ways microcosms of the...

DSW: And then they invented federalism, so multiple scales demos within tribes and so on. And so tell us more about that.

JO: So, the trick for a city state is to bring the smaller units, say average of about 150 adult male residents, into the system of the larger, tens of thousands. And the way to do it turns out to be, to group these smaller units into artificial larger units.

DSW: Which were just constructed out of whole cloth, they had no historical precedence, right?

JO: That's right. They are called, once again, in English, tribes. Which makes us think: They must be somehow natural or ethnic, but they're entirely artificial. What happens in the moment of the democratic reorganization is that several of these demes from different parts of the territory, extended territory controlled by Athens from the inland and from the urban area and from the coastal areas were grouped into a new completely artificial tribe, and the members of those demes then were told, "You are now, congratulations, members of tribe x, and you will be doing lots of things that are important together. You'll be fighting together in the army. You'll be engaged in various forms of religious ritual together..."

DSW: Warfare becomes part of this, is that right?

JO: Yes, exactly. So warfare becomes part of it. So, this is a way to push back against a kind of regional specificity that would naturally emerge, the people of the coast having economic local interests with the other people of the coast, and so on. The idea was to try to take this relatively large territory, by Greek standards, about a thousand square miles, and turn it into a single unit.

DSW: This was deliberate, this was mindful. This was...

JO: Very mindful, exactly right. Very thoughtful...

DSW: It didn't just emerge, it was not unintended, it was conscious process.

JO: Yeah, so that I think is part of the fascination of thinking about this in your evolutionary terms, here we have very self-conscious attempt to push towards some sort of higher level organization at this large city-state.

DSW: And talk about the control of elites, that was also mindful. We're going to have to do something about these powerful people in order to get them on our side, right?

JO: Yes, exactly so. The democratic revolution that comes about in the late sixth century BCE, in one sense, makes of all adult males, within Athenian territory, equals. Now you are a citizen. That means your vote in the citizen assembly is equal to the other citizens. It means you're going to depend on each

other militarily in the armed forces. But there was never an attempt to create full equality among wealth classes. So, how are you going to deal with the fact that those who are politically equal are not economically equal or socially equal? The problem as, once again, Aristotle saw very clearly is that elites will tend to seek to capture the system. If the way that you deal with elites seeking to capture the system is that you just periodically try to take all of their wealth or rise up and attack them, you'll have permanent civil war. That's bad because then when the Persians come in, they're knocked out very quickly (DSW: between-group selection) Exactly, exactly. The next door neighbor polis will take advantage of that. So you need to have some...

DSW: I know there was plenty of military fighting among the...

JO: Oh, yes. This is quite pervasive. So, the Athenians develop a system whereby it is expected that the wealthy will pay taxes and that only the wealthy pay taxes. But, on the other hand, the wealthy will be granted honors if they pay taxes at the proper level. Indeed, if you pay more than your mandated taxes, you can be given really quite grand public honors, will be granted positions of leadership if they demonstrate that their leadership is aimed at the good of the whole community...

DSW: So, basically it's an elaborated reputation system?

JO: It is, yes, exactly so. You can work it out in game-theoretic terms as a way to escape from the prisoner's dilemma by creating a cooperative agreement in which each side gives up something. So, if the masses agree that: We will, of course, honor these people who are wealthy. And the wealthy agree: Yes, we will pay the taxes and we'll-

DSW: And you can literally vote someone off the island, is that right?

JO: You can vote someone... And if someone doesn't play the game decides they want to be the boss, there's always the fear in the background that someone's going to try to become the king, the boss. Once a year, the Athenians would gather together in their assembly, they assembled many times a year, but the agenda, once a year, was: Should we have an ostracism? That is, should we expel one of our members without a trial? Just expel them? And if the vote went: Yes, we should. Then, shortly thereafter, every Athenian citizen was invited to come to the public square with a piece of broken pottery inscribed with the name of the individual that that citizen most wanted expelled. These were put into a great big pile and then they were sorted out. And the winner, or perhaps we could say the loser, depending on how you think about these things, the person with the plurality, think it's just a pure plurality, is expelled for 10 years.

DSW: Had to go.

JO: Had to go.

DSW: And that only happened like 12 times. So it's mostly the threat?

JO: That's right. If they're doing this constantly, clearly there you have another recipe for civil war. But they don't do it all the time, they limit the right to do it, they limit themselves to once a year. And in the roughly 200 years in which the democratic system is working at full force, yes, they only do it about a dozen times.

DSW: I'm so amazed by this. But, when we think about cultural evolution, then we have basically an origination of that in Athens, but then of course it has to spread. And there's a number of ways that it can spread. One is by conquests, let us say. Another is by copying. So, once you get a new cultural form like this, how did it spread? Maybe it was a combination of both? Well, actually, it's economics, there's warfare, and there's copying. So, talk about the spread.

JO: Yeah, I think it really is a, a mix of these, the Athenians turn out to be after their democratic revolution, extremely effective at warfare. This was noticed by historians at the time. And some of the

places that they conquer, other city-states within the Greek world, are encouraged to become democracies. The thought is, is that they'd be more loyal to the hegemonic power, Athens, if they were.

DSW: So this, was in a sense, imposed or at least strongly encouraged-

JO: In some cases. Although, once again, we know that there are people within the Athenian Imperial domains, the empire that only lasted about 50 years, but within this area, there are other states that are oligarchic. So, the Athenians aren't mandating democracy for each place, but they certainly do, in some cases, encourage it. But in many cases, it appears that the transition to democracy is one that is entirely voluntary, and it seems to be because the emulation, or copying, is just a... Yeah, it works better. The mechanisms that were devised in Athens or in other democratic city-states, just turn out to solve the problem of: How do you generate material welfare? How do you ensure security? How do you distribute the benefits of social cooperation more effectively than other forms of social organization.

DSW: And we all heard the term Hellenization in school, which means that there was something, and maybe we just covered this, that was sufficiently attractive about this culture, that it just spread on that basis, right?

JO: Yeah, it does. The organization into city-states rather than just in villages or towns, into self-conscious city-states certainly is something that spreads from the core Greek world into Anatolia, into Southern Italy, Sicily, parts of North Africa.

DSW: And even to some of the empires that took over...

JO: That's right. It was long thought, the idea was that after the Macedonians, under Philip of Macedon and his son, Alexander The Great, conquer the Greek city-state, so empire can work very efficiently. But, then we look culturally, the city-state form becomes standard, really, throughout a very large part of the area that was conquered by Alexander and his successors.

DSW: If I recall correctly, actually spent some time as an exile in Greece. Is that right?

JO: He wasn't an exile, but his father gave him a tutor that he thought he should learn about various parts of Greek culture. Who was his tutor? Our friend, Aristotle.

DSW: I was going to ask you, we hear about these philosophers as disembodied philosophers, but in fact, they were playing a role in the ecology of all of this, right?

JO: Precisely, right. And self-consciously. I mean, I think, anyway, that Aristotle wrote the politics and some of his other works about social organization intending to influence how people actually did structure their city-states and with, I think, some effect.