



NeuroSociety Stories – Pierre Magistretti

FULL TRANSCRIPT

CAROLINE MONTOJO, HOST: Welcome to “NeuroSociety Stories” from the Dana Foundation. We’re delighted to have Pierre Magistretti join us today. These sessions are an opportunity to share stories about neuroscience and society. These can come from Dana grantees, partners, and others who seek to increase neuroscience’s positive impact on society. The Dana Foundation’s vision is brain science for a better future. And we approach this vision with the recognition that all science can produce both salutary, as well as negative, effects on human well-being and flourishing; and we seek to maximize the potential of the field to do good. Our mission is to advance neuroscience that benefits society and reflects the aspirations of all people. It includes fields where neuroscience interfaces with the world beyond biology and medicine, such as ethics, law, humanities, social sciences, policy, arts, and public engagement.

Pierre Magistretti, lauded, neuroscientist and physician, is author to over 250 publications in peer-reviewed journals internationally. He is a professor emeritus at École Polytechnique Fédérale de Lausanne, University of Geneva, and University of Lausanne, and the former president of the Federation of European Neuroscience Societies and the International Brain Research Organization. Pierre is currently distinguished professor at King Abdullah University of Science and Technology. Pierre, welcome to the Dana Foundation.

PIERRE MAGISTRETTI: Thank you. It’s my pleasure to be here.

MONTOJO: Thank you for joining us. How did you come to recognize that neuroscience outreach is important, and why is it important for neuroscientists to participate in outreach and education?

MAGISTRETTI: Yes, it really came naturally, I should say. Of course, I was in my early forties then and had been focusing, I guess rather intensely, on my lab. My world, my society—outreach—was my lab, fundamentally, and I think this is fine, but I soon realized that what we do as scientists, first of all potentially has an impact on society. But even more importantly, we as scientists are, I think, accountable to society to do what we do.

MONTOJO: How would you explain what “neuroscience and society” is?

MAGISTRETTI: I think neuroscience and society is simply being a part of society. I mean, you’re a scientist. You cannot live in an ivory tower. You cannot just focus exclusively on your discipline, as we are human beings. We are fathers, mothers, we have friends, we

belong to associations—Human beings are social, but also, being a neuroscientist, working on the brain with all the entails in terms of exchanges between human beings, sensory processing, motor emotions, all that makes us, what we are is based fundamentally on the brain. So, you have to be interested in what is outside your lab in all different aspects, how neuroscience can impact different fields like you mentioned in the introduction, law, humanities, arts, and other aspects. And so you have to connect, you have to be aware, be informed of what's happening out there, so that feeds potentially even your research. And at the same time, as a neuroscientist engaged in society, you can say, well, from the brain point of view, I think we can have an opinion or advice on a specific aspect of society. So, it's a two-way street.

MONTOJO: How do you think interdisciplinary education and training could enrich a scientist's thinking or deepen the research impact on society?

MAGISTRETTI: Yes, I really am a very strong believer of, let's call it, as you mentioned, interdisciplinarity. It's a bit of a buzzword now. Everybody, everything has to be interdisciplinary. But I think there are many dimensions in "interdisciplinary." Of course, there is one that is somehow, let's call it, focused, or restricted to science, to neuroscience, for example. So you need studying electrophysiology, biochemistry, molecular biology, AI, now machine learning. So, you need many disciplines to try to understand behavior or processes in cells or mechanisms of diseases. But I think I know what Dana has in mind is more than that. It's really interdisciplinary. Also opening up to, let's call them, more humanities or aspects that are generally not immediately considered as being neuroscience.

MONTOJO: Can you share some examples of neuroscientific areas, research areas, that could be ripe for community feedback?

MAGISTRETTI: First of all, I think it's very important, this notion of a two-way street. You cannot be in your lab and do your experiments—and that may have an impact, for example, on developing some new molecules or new even therapeutic approaches or methods of investigation—and just not care about what their impact could be on society. So, you need to have feedback. There are developments that you can ask questions that have impact on society. For example, deep brain stimulation, gene therapy, just to take two examples,

MONTOJO: What can we do to strengthen the relationship between science and society?

MAGISTRETTI: You have to listen to the public and incorporate in your communication of your research, but also maybe in the way you do your research, this feedback.

MONTOJO: What I'm hearing from you is how important it is to bring science into the social fabric of life.

MAGISTRETTI: You said it much better than I did. [Laughs] Exactly. That's the exact term. The social fabric of life. Exactly.