



NeuroSociety Stories – Francis Shen

FULL TRANSCRIPT

CAROLINE MONTOJO, HOST: Hi Francis, good morning. Welcome back to the Dana Foundation and Rockefeller Center. We're excited to have a conversation with you today.

I'm delighted to welcome Francis Shen to NeuroSociety Stories. Francis Shen is the Chief Innovation Officer in the Center for Law, Brain, and Behavior at Massachusetts General Hospital. He is also a law professor at the University of Minnesota and a member of the Harvard Medical School's Center for Bioethics. Francis is the recipient of the Early Career Scholars Medal from the American Law Institute for his pioneering work in establishing the interdisciplinary field of neuroscience and law. Francis, welcome to the Dana Foundation.

FRANCIS SHEN: Thank you, Caroline. It's great to be here.

MONTOJO: You started out with an interest in law, and now you run a lab where the motto is, "Every story is a brain story." Can you share with us how your interest in law led to a career that includes brain science and neuroscience?

SHEN: When I graduated college, if you had asked me to list a hundred things I would do in my life, none of them would have involved neuroscience. I was really interested in law and policymaking and didn't see any connection between law, public policy, political science, and the natural sciences. But when I got to graduate school, doing a joint JD/PhD program, I focused on policy and legal responses to trauma survivors, both combat soldiers returning from Iraq and Afghanistan and survivors of assault. I realized I didn't know enough about why these experiences were so traumatic, and I wanted to learn more.

When I discovered brain science through some mentors in graduate school, a light bulb went on. I realized neuroscience not only helps me understand the people at the center of law and policy but also helps me understand how lawyers and judges think and how people make decisions globally. This led to our lab's motto, "Every story is a brain story," and that's really how I got into it—by constantly questioning "why" until brain science became the answer.

MONTOJO: It sounds like it wasn't exactly a straight path and that there were challenges in navigating the transition from one field to another. Could you share some of the challenges you faced in your career and how that experience inspired you to help others with interdisciplinary interests navigate their careers?

SHEN: The first big challenge was that I was deeply immersed in social science and law but had no formal background in neuroscience. Here I was, excited about the brain, but I didn't know anything about it. Through mentorship, luck, self-teaching, and immersion in the discipline, I managed to bridge that gap. That's a general challenge when working at the intersection of multiple fields—you can't do everything at once, but your interests might span different disciplines. Intensive teamwork and collaboration have been the key to overcoming that.

Another challenge was that when I got interested in neurolaw and neuropolitics, I looked around and realized there weren't many others doing this work. Fortunately, with mentorship and luck, I found opportunities just as I was finishing graduate school, thanks to the MacArthur Foundation's Law and Neuroscience Project. However, if I had been just a few years earlier or later, those opportunities might not have existed. This experience made me see a need, not just in neuro law but in other interdisciplinary fields like neuroeconomics, neuromarketing, and neuroethics, where people are intrigued but can't find clear pathways to follow.

MONTOJO: The Dana Foundation partnered with you to launch the Dana Career Network in Neuroscience and Society to support students like you once were, helping them navigate their cross-disciplinary interests. Could you share the goals of this Career Network and how it's going so far?

SHEN: We're just reaching our first-year anniversary, and I think things are going great. The mission of the Career Network is to expand and diversify the individuals and actors in the fields of neuroscience. We weren't sure who would show up when we held our first virtual career fair—I thought maybe 300 people would register and 80 would attend. But we had 1,800 registrants for something that had never existed before. We're really excited about that.

Since then, we've held nearly 40 events, with participants from over 300 schools in more than 25 countries. We have over 3,000 people on our mailing list. We're definitely reaching new people and getting the word out. We also wanted to put information out there about these fields, especially about careers in these fields. Our website, neuroxcareers.org, has become our home base for providing this information. We feature various neuro X fields like neuroeconomics, neuromarketing, and neuro law, and include videos and interviews with people who have been successful in these fields, sharing their unique stories.

A longer-term challenge is the need to create more opportunities. When we hire RAs or fellows for the Career Network, we receive hundreds of applications for just a few slots. The younger generation resonates with the idea of neuro X fields, but the institutions where they

might work are slower to embrace the concept. We're working to nudge those institutions along, but it's a longer-term goal.

MONTOJO: There is a strong appetite from the next generation of trainees, especially those with cross-disciplinary interests. You often use the term "neuro X" in the Career Network programs. Could you explain what you mean by neuro X?

SHEN: When I say neuro X, I'm using it as shorthand for the intersection—the "X" intersection—of neuroscience and society. It's a two-way intersection. On one hand, it's about different parts of society, whether it's teaching, making political or legal choices, providing social services, or making music, and how they might be improved or informed by neuroscience. One fun part of this project has been learning about fields at this intersection that I didn't even know existed, like neuro architecture. At first, I thought, "What is that?" But then I realized the built environment affects how we process information, how we think and feel.

The other thing that's been exciting is seeing connections between the fields. I think there are three things common to all neuro X fields: they are promising because they're based on the idea that neuroscience can help us understand human decision-making; they're all new, and still figuring out how neuroscience can improve their work; and they're not very diverse, either in terms of the institutions involved or the individuals coming from a homogenous set of backgrounds. We're trying to shake that up.

MONTOJO: When we looked at the Dana Career Network for Neuroscience and Society website, we were struck by how many neuro X careers there are. Did you have an idea of how many careers exist at the intersection of neuroscience and other fields?

SHEN: We haven't even finalized how many neuro X fields there are. Just last week, we realized we didn't have anything on neuro sports. It turns out there's a whole world of neuroscience in athletics. We're trying to find ways to infuse these neuro X careers into more traditionally labeled careers. One piece of advice we give students is that neuro X fields won't necessarily be labeled as such. You might not find a job title like neuro lawyer or neuro marketer, but the work increasingly involves neuroscience.

MONTOJO: Could you share some anecdotes or stories about the students and trainees you've been working with? What are you hearing from them about their interests and needs as they navigate these careers?

SHEN: The best part of working in the Career Network is working with young people and students. They are the ones driving the Career Network. We don't have a website designer or an event planner; we have students who do everything. It's so exciting. I've had students who immediately sent their pictures to their parents as soon as we got them. It's incredibly

rewarding to see how excited they are. This Career Network is homegrown for them, and that's really meaningful.

MONTOJO: That reminds me of my own career pathway in science philanthropy. I remember being a researcher at UCLA and feeling drawn to exploring a career where I could make an impact in the world by leveraging neuroscience. My first title after leaving research was Science Program Associate, where I helped with event planning and management for science conferences. That was my start. As I explored and grew in a career in science philanthropy, I learned how to infuse my background in neuroscience into that work. Openness and some risk-taking, along with mentorship, are crucial as you explore less defined careers.

What message would you share with leaders of science institutions about how to prepare the next generation of scientists for careers that span beyond neuroscience?

SHEN: The first and most important thing that institutions and leaders within those institutions—whether it's a department chair, vice provost, or PI—can do is to be supportive of students and trainees who voice an interest in interdisciplinary work. Indifference or outright antagonism toward interdisciplinary work is real and a significant hindrance. It shouldn't be something trainees have to hide or do on nights and weekends; it should be integrated.

The second thing is to create incentives for doing this kind of work. Some trainees feel that their neuroethics work isn't rewarded or incentivized as much as traditional lab-based neuroscience, and that can change. The third thing is funding. We need more funding—not just more money, but more types of funding that integrate societal concerns. This makes a huge difference. The NIH Brain Initiative is a real model for how to make neuroethics a part of all neuroscience, and we need more of that across institutions.

The mission of the Career Network is to train the next generation and to change policy to support interdisciplinary work. We're really excited about this mission because we're committed to the twin ideas that neurotechnology will shape society and that how it shapes society is up to us. Thanks to the Dana Foundation for spurring all of this through the pilot grant, and we hope for future collaborations.

Neuro X isn't just about applying neuroscience insights in other fields; it's also about improving neuroscience research and neurotechnology development. Better neuro X is better neuroscience research and better neurotechnology development as well.

MONTOJO: Thank you, Francis. Better Neuro X is better neuroscience research.

SHEN: I think so.

MONTOJO: You're making a new motto!

SHEN: Yes. We got a new motto. Yeah. Yeah. We gotta add that to our website.

MONTOJO: Exactly.