



Transcript of CleanLaw 14: Joe Goffman with Kathy Fallon Lambert on policy-relevant science, March 7, 2019

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- Joe Goffman: Kathy, I've been following your work for quite a while, and I found both the update paper you did on mercury science as well as the study you and your colleagues did on the Affordable Clean Energy Proposal to be particularly interesting, because it seems that in both cases, you and your colleague showed a knack for operating productively on the boundary between law and policy on the one hand and science and research on the other. And while a number of scientists don't venture anywhere near there, and some have even, say, talked to me about the perplexity of doing good science and good analysis while having an impact on policy, it seems to me that it's almost a signature of your work and output in your career to be able to seamlessly blend in a very productive way the work of science and research with critical, public policy questions. So, would you care to share your secret?
- Kathy Fallon Lambert: Well, thank you very much, Joe. I definitely consider that work at the interface of science and policy to be the core of what I'm interested in professionally and what my colleagues and I have focused on over the years. So, I appreciate your insights about that.
- Kathy: And, the impetus for working at this science policy interface really comes from an understanding that researchers and scientists have an obligation to give back to society because of the investment of public dollars in research. So to the extent that what we know and learn through science can be useful in decision making, that's an important piece of work to do. It's important in its own right.
- Kathy: So, I spend, we spend, quite a lot of time looking in detail at policies and supporting policy documents, like cost-benefit analyses, for two things. One, does it incorporate the most current science that's already literally in the literature. And also, are there assumptions about, say, how mercury works, the science of mercury or the science of fine particulate matter that are rebuttable presumptions that the science should address.
- Kathy: And after looking carefully, we might decide that what's needed is a synthesis of what we already know, and bringing that forward, or that new analysis and new research needs to be done. And we've operated at this boundary in both of those ways.



- Kathy: And for example, in the case of mercury, back in starting in 2005, there was a team who was interested in this question of mercury hotspots, and do biological or any form of mercury hotspots exists? It was assumed that they did not because of this idea that mercury is a global pollutant. And, we spent several years on that question, actually, knowing that probably over the very long term that would turn out to be irrelevant to policy relevant bit of science to produce. And sure enough, we were able to map the existence of biological mercury hotspots and revisit this idea of the contribution of power plants in the US to those hotspots. Well, that was both important from a policy perspective as we now see and productive scientifically. From that work at the interface, we generated a series of publications in the scientific literature that are now very highly cited.
- Kathy: So I believe that this idea that it's a sacrifice to a researcher or to a scientist to address policy relevant questions is just a false dichotomy. These are not necessarily, inherently separate sets of questions. Science can ask questions that are policy relevant and produce good, interesting science from that.
- Kathy: So, it's been really amazing to be able to work at that intersection and to generate science with colleagues that has had high impact in the domain of science, but also been useful in decision making. And so, one of the things that people I know who work in this space say is that the idea is to generate research that is useful, usable, and used. So, you need to start with listening and reading outside of science to understand how to do that.
- Joe: Well, what's actually striking to me as somebody who's been lucky enough here at Harvard to spend time with graduate students in the physical sciences, is that nothing you said, absolutely nothing you said, involved or came anywhere near involving any kind of compromise of the disciplines, the ethic, the protocols of good science, that you and your colleagues can function as scientists and still have an impact on public policy, and that there's no need whatsoever to tailor, compromise, corner cut, or adulterate your work in order to be policy relevant.
- Kathy: Oh, that's a really interesting view. And in fact, I would say it's quite the opposite, that if you are going to do work in this domain that's at the interface of science and policy, it is paramount that you not cut corners and that you meet the highest possible standards of scientific integrity because you can be sure that it will come under the microscope. And so, I don't believe that scientists are out there cutting corners in any case, but when it comes to this sort of work, it has to be above reproach. That's one of the hallmarks of doing this work well.
- Joe: Kathy Fallon Lambert, if you didn't exist, we would have to invent you.
- Kathy: Well, there's probably lots of people out there doing this work. And maybe by talking about it, there's an opportunity to lift up even more people out there and



train scientists to understand that you can still work in the domain of science and be policy relevant.

Joe: Well, so much of what we're talking about, particularly these days since the advent of the Trump administration, involves real problems that the so-called policymakers are introducing. To hear somebody like you who works in this area deliver such a clearly hopeful message about the power of the disciplines in which you work. The fact that you're not doing it alone really is wonderful.

Joe: That was just not empty flattery, Kathy, what I just said, because I think there's something else that I've heard you say before, which is maintaining absolute and complete scientific integrity is not only essential to being able to be productive as a scientist, and as a scientist that provides useful information, but it's knowing how to do it. And I think what I heard you say was, it's just a matter of being able to ask the right questions.

Joe: When I, earlier in my career, worked with scientists like Michael Oppenheimer, he explained that what scientists really do is research, not to find answers, but to find the next good question to ask. So, do I have it right? Is that the secret? Is that the open secret to your success as a scientist working in the area of policy?

Kathy: It's a key component, I think, of how to do this effectively and productively. I think that sometimes there is a sense that in order for the work to be influential, an advocacy role must be assumed. And, I have found that actually the most important thing is to read the policy documents very carefully and then consider what are the most important questions that science can help answer now and that will be important over the next several years that we should be tackling. And, that keeps the work in the science space and generates interesting research while still also hopefully being useful to society at large and to a particular policy decision.

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