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## Discussion

## Response to Lövbrand and Öberg

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Lövbrand and Öberg's commentary ably restates some of the core points in our papers, in particular our discussions of how the nature of science and politics precludes the clean separation of facts and values. But acknowledging this state does not get us very far toward practical alternatives.

Lövbrand and Öberg argue that to improve the continually unsatisfactory state of environmental politics it is necessary "to instigate a reflexive and philosophically informed discussion about the situated and provisional nature of scientific advice in environmental policy-making among scientists themselves and those making use of scientific results." Such a discussion, they say, is an alternative to renewing the "demarcation between the realms of facts and value conflicts."

Their recommended path to institutionalizing this discussion is to bridge the "communication gap between natural scientists and scholars engaged in science studies." Such arguments are familiar. Science studies scholars, after all, long ago demolished the notion that improved "public understanding of science" lights the path to better decision making. Are Lövbrand and Öberg now claiming that "scientists' understanding of STS" is the true path to enlightenment? If we believe that better understanding of science by the public is insufficient to motivate better decision making, why might we except that better understanding of a particular field of social science by natural scientists would compel this desirable result?

If nothing else, such prescriptions founder on the very practical objection that most natural scientists just are not going to have the time or incentive to understand what STS is all about. And, if they did, they still might not like what they learn. Similarly, while we acknowledge our own very weak understanding of quantum electrodynamics and molecular genetics, we nevertheless, remain convinced that

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the associated bodies of knowledge are "situated and provisional." And we dare any natural scientist to convince us otherwise! Surely, the insights of STS apply not only to the natural sciences, but to STS itself.

But okay, let us imagine a world in which this ideal discussion between natural scientists and decision makers is actually taking place, with the result that all participants in the conversation understand that knowledge is "situated and provisional," and that facts and values, science and notscience, are not clearly delineated. In this world, are we to expect that the newly enlightened scientists would then initiate "a public discussion about the limits to scientific inquiry and hence [open] up for social monitoring and scrutiny of scientific results [sic]"? Presumably, these enlightened scientists would no longer worry about where their funding will come from, and they would, moreover, be willing to cede their considerable authority to a bunch of social scientists.

Where would this ideal discussion take us? Meaningful action on politically contentious issues does not occur when contending parties arrive at convergent philosophical understandings of the meanings and interactions of knowledge and values, but (to oversimplify) when (a) one party achieves sufficient power to force its agenda on the other or (b) options are recognized or developed that allow contending parties to envision outcomes that are more advantageous than the existing state of conflict, thus facilitating compromise that allows a course of action. These dynamics—not the apprehension of the constructed nature of knowledge-explain success stories in environmental politics and policy-and the achievement of successful political action more generally.

Jasanoff (1996) wrote that STS encompasses "a deeply normative project . . . to render more visible the connections and the unseen patterns that modern societies have taken pains to conceal, often by enlisting the unquestionable forces of the physical world as represented by the voices of

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scientists-seers." Our papers engage this project not by arguing for the constructionist paradise anticipated by Lövbrand and Öberg, but by suggesting practical, direct avenues that get us to the same place—an enhanced capacity for productive political discourse—through some practicable options that people can understand. In doing so, we take advantage of what most people believe anyway, rather than

expecting that we can change these beliefs as a prerequisite for effective action.

## Reference

Jasanoff, S., 1996. Beyond epistemology: relativism and engagement in the politics of science. Soc Stud. Sci. 26 (2), 393–418.