Possibilities, limits, and conditions of
a "Philosophy in the Field."

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I want to start with my answers to the three questions we posed for all. As you will see, what I can say with regard to these questions is influenced by Bob Frodeman's ideas about a "Philosophy in the Field" to which I feel very close. After that, I will raise two further questions that we *should* have asked additionally. These questions will lead to a more critical reflection about the limits of Bob's field philosophy.

1. What are major conceptual and practical problems of interdisciplinarity that you face in your research projects?

In my research, I focus mainly on diagrammatic reasoning, that is, on the role that the construction of diagrams and experimenting with them can play for cognition. The cognitive processes I am interested in can be subsumed under the heading "framing and reframing." The concept of framing has been introduced in conflict research to describe how parties to conflicts and people in inter-cultural settings make sense of what is going on and interpret and construct reality according to priorly acquired habits of thinking, conceptual tools, theories, and narratives. The idea of "reframing" assumes that the resolution of conflicts and communication problems might be possible when people change their original frames. Both concepts, however, can also be used to describe learning processes and creativity in general, and more specifically learning in scientific and public deliberation and in interdisciplinary collaboration.

In this context, I developed an argument visualization tool called "Logical Argument Mapping" that is supposed to visualize framing processes (LAM; see http://lam.sp-p.gatech.edu). In a project funded by the U.S. Department of Education I am implementing Logical Argument Mapping right now in an interactive web-tool "AGORA: Participate - Deliberate" (see http://agora.gatech.edu). The AGORA will be an online world in which people from across the globe can create arguments and can contribute to debates. As a learning tool, AGORA is supposed to promote problem-based learning in small student groups; as a deliberation and an analytical tool, it should support mutual understanding, self-reflexivity, and a better understanding of problems. In all these settings, the AGORA system should promote reframing.

Let me provide an overview of the practical problems that I am facing in this research in form of a table:

Practical problems	*Description*	*Practiced solution*
Communication	• finding a language to communicate my ideas about Logical Argument Mapping to the coder of the AGORA software • explaining the significance of certain design decisions • understanding design decisions from the realm of software development	using a lot of drawings and examples
Need of expertise from other disciplines	fulfilling certain requirements of funding agencies like: methods to evaluate learning; language acquisition	Integrating colleagues from other disciplines, which again leads to communication problems

The problem of communication is also the problem on which I am concentrating in my research on interdisciplinarity. The conceptual problems that I try to address are:

- How to conceptualize the problem of communicating across disciplinary boundaries as a problem of framing and reframing?

- How to develop a theory of cognition that can explain the role of argument visualization tools in promoting reframing? Such a theory should help to design of those tools.

2. What can philosophy contribute to an understanding of interdisciplinarity?

Concepts and Theories, like the ones that Jan Schmidt developed over the years. From my field I would add concepts like distributed cognition (the extended mind), framing, collateral knowledge, and abduction, and theories like those about diagrammatic reasoning and argumentation theory

Methods: Conceptual analysis; criticizing arguments as we find them in the public and the scientific arena and proposing our own arguments, both based on the rich tradition of philosophical reflection.

Perspectives: A certain sensitivity for conceptual problems and problems that result from discipline-specific ways of framing things and processes; relating contemporary debates to discussions in the history of philosophy.

3. What kind of new philosophical practice can we envision that will be shaped by interdisciplinary collaboration?

- Openness to problems posed by others, not only by our own history

- New ideas on how to teach philosophy so that such an openness gets stimulated to prepare future generations for interdisciplinary collaboration

- Applying and developing philosophical expertise to support interdisciplinary collaboration and communication.

- Bob Frodeman's idea of a "philosophy in the field" is for me the most convincing and best developed vision of a new philosophical practice. A year ago, Bob presented a picture of philosophy that no longer draws its pride from the "rigor" it idolizes as its paramount value. Instead of looking at lab science as an analog of what philosophy should do, Bob proposed to look at science as it is applied and developed "in the field." This would lead to what Bob called "field philosophy." "Field philosophers would operate on specific projects with scientists, engineers, and policy makers, community groups and NGOs. Philosophy as interdisciplinarity would not eschew theoretical questions; quite the opposite. But its theory would be rooted in and always return to extra-philosophic practice."

4. Two further questions that we should have asked ...

When we prepared this workshop, we thought that the three questions we asked everybody to answer would cover the most important elements when it comes to philosophy and interdisciplinarity. This might have been a mistake. What is missing are two further questions. The first one is a question that adds something to our first question. Whereas we asked "What are major conceptual and practical problems of interdisciplinarity that you face in your *research projects*?," we should also have asked a question that Nancy Tuana emphasized when I met her a few months ago: "What are the problems that we face in *teaching* interdisciplinarity?" The second question I would add refers to our third question which asked: "What kind of new philosophical practice can we envision that will be *shaped by interdisciplinary collaboration*?" The focus of this question can be turned around: "What kind of new interdisciplinary collaboration can we envision that will be *shaped by philosophy*?"

This last question adds also something to our second question which asked "What can philosophy contribute to an *understanding* of interdisciplinarity?" I guess that Bob's idea of a "philosophy in the field" is based on the assumption that philosophy

can, first of all, contribute something to the *practice* of interdisciplinarity, not only to its understanding. But the question is: What exactly can philosophy contribute here? How can the practice of interdisciplinarity be shaped by philosophy?

From my point of view, it is first of all the *methods* that I listed above with regard to our second question that can contribute to this practice; that is, our skills in analyzing concepts and arguments. Both can help to overcome problems of interdisciplinary communication. Applying those methods belongs to what I am calling in the title of my presentation the *possibilities* of a "philosophy in the field."

5. Limits of a "Philosophy in the Field"

But what about its limits? I would like to use a reflection on Nancy's question about "How to teach interdisciplinarity?" as a starting point to discuss at least one problem of a "philosophy in the field." Bob mentioned already last year that there is a "dilemma" between the specialization of disciplines and the scope and applicability of what they find out. As he wrote, we "are able to go deeper into a given subject only by passing over examination of the lateral connections between that subject and the rest of the universe of thought and action." The deeper disciplinary knowledge production goes, the more it loses the contact to what motivated it in the first place.

Instead of talking about a "dilemma" with regard to this problem, I would say there is a trade-off. The need to reflect on this trade-off is of paramount importance, I think, when it comes to teaching in interdisciplinary environments. I am teaching philosophy in a School of Public Policy. The School recently completed a substantial revision of its curriculum for the undergraduate program in Public Policy which provides an excellent case in point. The new core curriculum lists the following required classes: Government of the U.S.; Political Processes; Philosophical Analysis of Policy Choices; Organizations and Policy; Microeconomics; Applied Political Economy; Policy Analysis; Statistical Analysis for Public Policy; Research Methods and Problem Solving; Policy Internship; and Policy Task Force (an experiential project in which student teams formulate, analyze, and recommend policy options).

We can consider any interdisciplinary curriculum, but we always face the problem that there is a limit to the amount of stuff you can teach within a certain time. For any given curriculum you have to decide what is "in" and what is "out." And even if something is "in" like the only philosophy class in our case, it is extremely hard to do this in a way that is really beneficial for students. There is a danger that philosophy itself will become flatter and flatter when its scope becomes broader and broader.