Dissolving Boundaries in the Policy System

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Abstract

Based on personal experiences with science policy advice, this paper argues that science and technology studies (STS) would benefit from developing closer collaboration and collegial links with innovations studies (IS). When it comes to achieving impact outside our academic circles, disciplinary boundaries do not seem very relevant. Rather, it would be preferential if our contributions were based on systematic interaction with neighbouring fields – and if our relations with those fields were based on strong networks of collaboration.

Keywords

science advice; science communication; science policy; innovation studies; expertise

Introduction

When I was a member of the Council of the European Association for the Study of Science and Technology (EASST) in 2013–2016, we sometimes had discussions about the relationship between science and technology studies (STS) and innovation studies (IS). The usual question was whether we should seek more collaboration between these fields. There were quite a few voices in the membership who simply did not see the point. I was more positive, although I could not really formulate at the time, why? Reading Irwin's discussion paper for this collection and his points about the *here and now being confronted with problems and wanting to do something about it*, however, made at least one argument take shape in my head: if STS wants to contribute to the world outside our own academic circles, we need collaboration partners and networks as well as friends and allies. In this short piece, I want to use my own experience to illustrate this point and to add a couple of questions of my own.

In 2014, I was appointed to the Danish Research and Innovation Policy Council (DFIR), which advises the Danish Minister and Parliament. The Council had just been reshaped to include innovation policy and in the new formation it consisted of a chair, who was a former long-term (and publicly well-known) vice-chancellor from a Danish university, and eight members appointed in their personal capacity with experience from public and private research and innovation. I believe my qualifications were to know about science communication and possess leadership experience from a university as well as my gender and age. I

was a member for almost six years and overall, it was extremely interesting and provided lots of interesting opportunities for engaging and learning about science advice and the policy system. When I left, I was appointed as a member of the Board of the Independent Research Fund Denmark, and a year later promoted to chair of the board. In this role, I have quite a lot of contact with the Danish political system about various science policy issues, so the issues I write about here are still relevant for my daily life.

In what follows, I will focus on the experience of advising on science and innovation policy in DFIR. It is important to note that the Council was quite independent. With our small secretariat of three people, we mostly looked at issues of our own choice, although there were also requests from the political system. The following list covers the major themes that we worked with in my period as member:

- the international competitiveness of the Danish research and innovation system
- effectiveness of innovation support schemes for private companies and particularly SME's
- the use of evidence-based knowledge in policy-making
- sector mobility of researchers
- gender imbalances in the Danish research system
- career structures in research
- the export/import balance of knowledge in the form of contract research, patents and people
- technology development for green transitions

To the readers of this journal, I believe it is rather obvious that such topics can benefit enormously from knowledge from the fields of STS and IS. But neither of these fields are known to the Danish political system and therefore not recognized as areas of expertise to be systematically fed into the discussion. This is partly a broader issue, as social science (other than macroeconomics and law) and humanities are generally not seen to be hugely important for policy advice in Denmark. In this setting, it was clear that simply representing just STS would not be sufficient. Rather, as the only person with an explicit background in social science and humanities (SSH), I often came to be the spokesperson for this entire area of research.

The working climate in the Council was very pleasant, and we shared a common ethos of each of us making contributions as best we could in order to develop knowledge-based policy recommendations. This was also how I experienced my own role. Sitting with a group of very knowledgeable people discussing how the Danish research and innovation policy could be improved, I wanted to contribute to make the recommendations as good and as research-based as they could be. As the list above indicated, our discussions went far beyond my own academic research expertise. My experience was therefore one of drawing on bits and pieces which might be relevant for the objective at hand, without caring much about their disciplinary origin. Council members allocated attention and credibility to whoever said interesting and useful things that would help the entire Council move forward towards a resolution of the problem at hand. In that context, it was useful to have a broad knowledge base. However, what mattered was to make this knowledge relevant.

In this setting, academic disciplines seemed almost completely irrelevant. I would know that I was drawing on STS and to a lesser degree on IS (due to my limited knowledge) as well as a lot of other basic social science, but the people in the room would more or less just see input from Maja Horst. Of course, I often explained the background to my input – bolstering legitimacy of my points by referring to their research base and trying to familiarize my fellow council members with STS research – but I never experienced that the knowledge base itself became the focus of attention. I don't think the policy actors ever considered that they could ask another STS person instead of me. While this can be flattering, it also left me with a sense of vulnerability. I would try to cloak myself in my discipline, but such clothes seemed to stay invisible to the policy system.

The lack of disciplinary boundary making, however, can also be liberating and it opens up the space for making contributions by drawing on all kinds of knowledge – even if it goes well and truly beyond one's own area of expertise. I consider this a form of science communication, which is similar to what I have described as 'representing science as a social institution' ([Horst 2013](#)). As one of my informants in that paper described it, you are letting people down, if you rigidly stick to your own area of expertise. He considered it his responsibility to answer people's questions as best he could – no matter whether they were within or outside his disciplinary area. This is quite a good description of how I felt in my role in DFIR.

Inevitably, this effort to be useful sometimes leaves you on thin ice. I once introduced the concept of 'absorptive capacity' in a discussion about the use of research-based knowledge in the state administration. I must have picked up the concept in passing when working at Copenhagen Business School, but I did not really know much about it, and I certainly would not have been able to give a proper key reference such as Cohen and Levinthal ([1990](#)) at that time. However, the concept seemed to perfectly describe the need for state administrations to employ research-trained staff in order to enable them to identify, evaluate and use relevant scientific knowledge. So, the concept worked for the problem at hand and no one ever asked me what I actually knew about it.

Evidently, this example points to an issue of credibility. There are limits to how much we can just appropriate knowledge from other fields and still be perceived as legitimate. This is exactly the reason why we need more boundary spanning between STS and IS – and a lot of other disciplines. Those disciplinary boundaries, which might seem important at an STS conference, are not very helpful if we want to achieve impact. As we know well, societal problems do not correspond to neat disciplinary boxes ([Klein 1996](#)). But it would probably be advisable if our contributions were less based on accidental bits and pieces (as in the example above) and more on systematic interaction with neighbouring fields – and if our relations with those fields were based on strong networks of collaboration. It would be great to be recognized as representatives of important fields of research, rather than as individuals who just happened to know stuff. We need friends and allies, networks and collaborative partners if we are to make our STS knowledge achieve impact in the world. The field of IS has been very successful at achieving impact. We could also learn from them. Would this be too risky for our own self esteem?

How do we actually think about STS-based science advice? Is it something, which is worth doing? And how much do we need to know in order to start giving advice? About STS? About other disciplines? Rather than ending up in a content-based discussion similar to the notion of a periodic table of expertise (Collins and Evans 2007), I would rather see this as a question of forming links with IS experts who could help us calibrate what is reasonable to say. In the world of research and innovation policy, there is so much being said which does not have any connection to the solid knowledge bases that our disciplines provide. Why don't we work more together to help improve this policy field?

Maybe my experiences and these questions are shaped by the fact that I work in a rather small country with a policy system that is too small to cover all forms of expertise. I usually look with envy at The Netherlands or Britain, where it seems that the disciplines of STS and IS are much more entrenched in the policy system and their expertise is recognized. But is this actually true? Colleagues in those countries will have to provide their own answers to this question, but pondering this, I re-read Andrew Webster's 2007 account of his own experiences with crossing boundaries in the policy room (Webster 2007), and I was struck by how well he describes the balancing act of engaging with policy and being useful while retaining a critical perspective. Webster argues for the making of a 'more "serviceable STS" that retains its critical and independent perspective of science' (ibid., 458). As he points out, the latter is necessary in order to contribute to the de-purification of science in the policy world and this must be the key concern of STS. However, he also describes how STS knowledge *can* be put to use for policy-makers with an example from his own work – an analysis of 'Foresight methodologies'. In this particular analysis, Webster and his colleagues constructed a model that explained 'Foresight methodologies' as a particular case of *Future Oriented Co-ordination Activities*: 'Framed solely in terms of future innovation dynamics and modelling thereof, our model "made sense" to policy actors within government and "worked" for them at that normative level' (ibid., 469). However, as Webster notes, this form of policy advice did not radically challenge the normative basis for the policy-makers:

> (W)e could have gone further than this and argued that Foresight is primarily a form of futures thinking that serves the interests of various social (including economic) elites and does little to include other voices that might ask whether the priorities chosen serve broad social values (ibid.).

It is easy for me to recognize the normative challenge Webster describes here, as I have often debated with myself how far to take the critical edge in giving policy advice. I have a strong sense that one of my problems has been to be alone in the room. Webster puts forward a general task for STS to 'endeavor to bring together analysis that works with as well as across the policy-making grain' (ibid.). It is my belief that incorporating both 'with' and 'across' is easier if there is more than one voice speaking. We could perform several voices in STS (if more of us got into the room). We could also nurture a respectful working relationship with IS so that we together represent a multitude of voices that would help de-purify science and technology. Many scholars from IS would agree with us on this need (Fagerberg et al. 2013).

So, in conclusion, and getting back to Irwin's second question for this thematic collection, I believe that we should do much more to develop a mutually beneficial, respectful and collegial relationship with IS. In fact,

in STS we need to take care not to mistake policy-maker's delight in the idea of progress through technical innovation with the much more balanced considerations of the innovation system put forward by many IS scholars:

> Even as we consider issues of science and technology policy in terms of promoting the best use of human knowledge, we are also living in a world where the precautionary principle and the democratization of technology assessment now play an increasingly central and progressive role. (Steinmueller 2013, 153)

It is a foundational value for me that we use STS to improve society, rather than just critically observe from a distance how things go wrong. To do this, we need to work both 'with' and 'across' policy-making. We need to be inside the policy room improving policy-making for a better future society by working *with* policy-makers. And we also need to stand outside critically assessing what is going on, which is how I understand Webster's idea of working across. I sincerely believe that IS scholars would argue the same. Certainly, I think we would all be more successful if we forged closer and stronger relationships where we draw on strengths from both fields in order to address the problems at hand.

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Author Biography

Maja Horst is Dean of Arts at Aarhus University and former professor of Science Communication at University of Copenhagen.

Data Availability

Data published in this issue can be accessed in STS Infrastructures at: https://n2t.net/ark:/81416/p4ds3n.

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