

Disciplined Interdisciplinarity?

A Brief Account of STS in Norway

Knut H. Sørensen

Abstract This paper discusses Science and Technology Studies (STS) in Norway by using interdisciplinarity as an accounting device. I present several ideas about interdisciplinarity in relation to STS, but Sheila Jasanoff's proposal of a disciplined STS seems to fit best with the Norwegian scene.

Keywords Science and Technology Studies; Interdisciplinarity; Institutionalisation; Norway.

Introduction: how to account for STS?

In the mid-1990s, I was involved in an effort to map technology studies in a number of European countries (Cronberg and Sørensen 1995; Sørensen 1997). An underlying idea of this effort was to analyse the emergence of social study of technology as a scholarly field. While we could observe a common set of concerns, above related to innovation policy, the institutional matrix of intellectual development varied considerably.

The underlying expectation was convergence; that we would find national differences in the shaping of technology studies but that these differences would diminish as technology studies was consolidated internationally. We observed a shared international body of scholarly knowledge, but this appeared to be interpreted and used in different fashions. Thus, apparently, there was an interesting relationship between international and national intellectual developments that could not be understood in simple terms like 'reception' or 'national styles'. With respect to Norway, I argued (Sørensen 1995) that technology studies had been shaped above all through an interaction between an economic history of technol-

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ogy and industrial technology, but with a clear imprint of the international development of technology studies as a field of research.

Now, more than 15 years later, I have been asked to provide a kind of cartography of Science and Technology Studies (STS) in Norway. Would the previous report provide an interesting point of departure for an update? I think no, for two reasons. First, STS in Norway has become more established while catering a broader set of intellectual concerns. This makes it more difficult to account for the Norwegian STS scene. Second, the convergence model that we conversed with in the earlier work, appear less satisfactory as a tool to make sense of the present situation. Rather, reflecting on how to make sense of Norwegian STS, it struck me to use the concept of interdisciplinarity as an accounting device. On the one hand, STS in Norway – like in many other countries – cultivates interdisciplinarity by using the concept as a distinguishing quality. This represents a diversifying force. On the other hand, efforts particularly with respect to education pursue a path of disciplinarity, a unifying feature. Is this a paradox? May we use the situation of STS in Norway to illuminate what the doing of interdisciplinarity could mean?

A potentially important feature is that scholarly fields like STS tend to have a local as well as an international flavour, which may influence the practices of interdisciplinarity. Scholars address concerns that may meet with local as well as international interest and grapple with the issues using local as well as international interpretative resources of disciplinary as well as interdisciplinary character. Arguably, addressing an international audience focused on STS could be seen to be a force of disciplinary convergence, while addressing national communities that have thematic rather than disciplinary interests could be presumed to produce an interdisciplinary and thus more disjointed orientation. However, the effort of Martin et al. (2012) to provide an overview of the knowledge base of STS in general should serve as a warning that this may be more complex. They claim that internationally, STS is fragmented, even if there is some agreement about the scholarly contributions that constitute the core of the field. The fragmentation is in the paper partly attributed to weak institutionalisation but also to an observation that STS – compared to adjunct fields like innovation studies and entrepreneurial studies – has a more ‘egalitarian’ flavour, which makes consensus building more challenging.

To pursue these issues, the next section presents some main institutional features of STS in Norway as a point of departure for discussing to what extent and through which means institutionalisation has happened. As we shall see, disciplinary forces are at work, raising questions about why the label of interdisciplinarity still is used, eventually what it means to use this label. In response to such questions, I turn to a more general discussion about interdisciplinarity and STS, before getting back to the Norwegian case with a focus on some features of the publication output of Norwegian STS scholars. How is the relationship between national concerns and internationally oriented contributions? What may we learn about scholarly dynamics of a self-proclaimed interdisciplinary field like STS?

I. STS coming of age in Norway: notes on interdisciplinary building of institutions

In 2009, the Norwegian Association of Higher Education Institutions confirmed the establishment of an academic council for Science and Technology Studies. This could be seen as a formal acknowledgement of STS as a scholarly field in Norway. The academic council consists of representatives of three institutions: Centre for the Study of the Sciences and the Humanities, University of Bergen (SVT), Centre for Technology, Innovation and Culture, University of Oslo (TIK), and Department of Interdisciplinary Studies of Culture, Norwegian University of Science and Technology, Trondheim (KULT). These three institutions are the core STS communities in the Norwegian university context; however, as we shall see, STS also has other important outlets.

The history of the three institutions indicate different pathways in the making of STS in Norway, where the establishment of teaching programmes have played an interesting role as a force of convergence. SVT in Bergen was formed in 1987, initially to undertake teaching of theory of science at University of Bergen. The profile of the centre has been dominated by philosophy, but increasingly, the research has been directed at ELSA (Ethical, Legal and Social Aspects) topics. With respect to SVT, it is mainly the engagement in these kinds of inquiries that during the last decade or so have given the centre a distinct STS profile.

TIK was started in 1999 when the previous Centre for Technology and Human Values (TMV) was merged with an innovation studies group. TMV, which comprised the initial STS effort at the University of Oslo, was formed in 1988. This was a result of an initiative from the Norwegian Academy of Science and Letters to initiate research to critically investigate the interaction of modern technology and social values. Such mandate is recognisable as a starting point of many STS programs also in other countries, where a main focus has been to explore in a critical fashion the role of modern science and technology in society, including ethical engagement with the teaching of engineers. TMV became at the outset a stronghold of history of technology in Norway, drawing in particular on economic history approaches. However, other humanist disciplines and social sciences became increasingly important during the 1990s, broadening and solidifying the STS profile of TMV. Leading STS scholars like Donna Haraway and Sharon Traweek visited TMV, and later John Law was appointed adjunct professor. This process of developing an STS community has continued through the new centre, TIK, which was organised with two sections: STS and innovation studies.

KULT was established in 1999, as a merger between Centre for Women's Studies and Centre for Technology and Society (CTS). CTS was formed by the university in 1988 and became the main STS institution in Trondheim. This happen partly as a response to a series of initiatives from STS scholars to get an STS centre established, but also as a reaction to the TMV initiative in Oslo. Like TMV, CTS was to engage in research and teaching in the field of science, tech-

nology and society, with particular emphasis on the interaction between social change and technological development, history of technology and studies of technological R&D and innovation. During its first decade, CTS mainly combined historical and sociological approaches to STS but also information science and philosophy of technology. Later, people with other disciplinary training like anthropology, psychology and political science were recruited.

Thus, all the three core STS university institutions were founded in the late 1980s. While SVT in Bergen was formed with a specific purpose of teaching theory of science, in particular to PhD students, TIK (TMV) in Oslo and KULT (CTS) were initiated as a response to a concern about the social implications of – in particular – modern technology. In the same period, research programmes were launched to fund research related to innovation, social effects of new technologies and social features of technology, in particular information technology. These programmes were intended to cater for a broader set of approaches than STS, but they offered important opportunities for the centres to fund research, in particular PhDs. A growing concern for social and ethical issues in the engineering communities also paved the way for STS in Norway. For example, CTS was called upon to teach environmental ethics to engineering students. However, unlike many other countries, the Norwegian STS centres were not populated by established scientists and engineers, who wanted to critically engage with the effects of science and technology.

In terms of the disciplinary background of the people involved, STS in Norway was formed with an interdisciplinary point of departure. With the exception of SVT, which mainly was a philosophy of science centre, the community grew through a disciplinary matrix where history and sociology of technology were particularly forceful. In addition, interaction with engineering sciences and architecture was important. To what extent was this caused by interdisciplinary ambitions? How should we characterise the interdisciplinary practices of STS in Norway? To deal with such questions, we need to clarify the concept of interdisciplinarity as well as how it has been applied to STS more broadly.

2. Interdisciplinarity and STS: an interacting field?

Arguably, STS is a self-proclaimed interdisciplinary area. The Introduction to the most recent handbook of science and technology studies states bluntly that: “STS has become an interdisciplinary field that is creating an integrative understanding of the origins, dynamics and consequences of science and technology (...). Through three decades of interdisciplinary interaction and integration, shifting intellectual continents and cataclysmic conceptual shocks, perseverance and imagination, STS has become institutionalized and intellectually influential, and STS scholars have become engaged in various arenas of activism and policy” (Hackett et al. 2008, 1). When we look beyond the self-gratulatory rhetoric, it is interesting to note how the concept of interdisciplinarity is left unaccounted for. The Handbook editors do not seem to feel that they have to explain what inter-

disciplinarity means or why this label applies to STS. Apparently, STS is interdisciplinary because it cannot be disciplinary.

Scholarship on interdisciplinarity distinguishes between a multitude of different practices (e.g., Klein 2010). However, Peter Weingart (2010) claims that new interdisciplinary fields are formed either as new specialised fields of inquiry or as fields promoted by funding agencies. The latter are “combinations of disciplines or sub-disciplines that are joined in research centers, journals, and funding programs but that remain intellectually independent and continue to develop individually (...). Thus, disciplines and their derivatives, specialities, and research fields, remain the principal organizational unit for the production and diffusion of knowledge” (Weingart 2010, 13). Weingart’s argument applies to interdisciplinarity in general. Is STS a specialised field or a funding agency construction?

Sheila Jasanoff (2010) addresses the issue of STS and interdisciplinarity in a different way. To begin with, she notes that in 2001, STS was included as an ‘intersecting field’ in the *International encyclopedia of social and behavioral sciences*. Jasanoff claims that this was the first time that “STS was named as a card-carrying field in a comprehensive roster of the social and behavioral sciences” (p. 191). The label ‘intersecting field’ is an interesting one, because it was intended to emphasise that STS operated in the intersection of social and behavioural sciences on the one hand, and natural and engineering sciences on the other. Accordingly, STS was located in a comprehensive disciplinary matrix, indicating that the field would be engaged in a wide variety of interdisciplinary situations.

Jasanoff interprets this to mean that STS is interdisciplinary in a very particular way. STS has not, she claims, come into being: “principally through exchanges among scholars already belonging to one or another established disciplinary community and trained in its forms of reasoning and research practices” (p. 192). Thus, in her understanding, the interdisciplinarity of STS is not primarily about crossing and bridging borders, which are Julie Thompson Klein’s (1996) favoured metaphors for interdisciplinary practices. Rather, Jasanoff sees STS as “an independent disciplinary formation situated among other disciplines”. For her, STS is “an attempt to chart unknown territories among islands of disciplined thought in the high seas of the unknown” (p. 192-93).

There are good arguments to support the idea that the topic of STS, to study the practices of science and technology as well as their effects, largely has been ignored by other disciplines. Still, as Jasanoff notes, when STS claims special status as *the* field that analyses science and technology, this is not universally accepted. Other disciplines and specialities maintain that they also study aspects of the topic, and such scholars even participate in STS meetings and publish in STS journals. Moreover, also within STS, there is considerable reluctance to claim special status and to engage in the building of institutions necessary to support the claim. Thus, Jasanoff observes ironically that “Many therefore prefer ... to retain STS as a loosely constructed society to which anyone with a passing interest can gain easy entry. This broad-church approach satisfies liberal academics’ often deep-seated desire for intellectual democracy, but it also gets in the way of

critical stock-taking, meaningful theorizing, and methodological innovation – in short, of *disciplining*” (p. 204).

In this manner, Jasanoff suggests an ambiguous image of STS, as a potential discipline but where many practitioners are reluctant to realise the potential. What are the consequences of this situation? I shall address the issues by returning to the case of Norway, but let me first briefly suggest a few more concerns that may be relevant to the exploration of interdisciplinarity in STS. In a recent paper, Bruno Latour (2010) complains humorously that his books are difficult to find because they are spread over a number of labels – law, engineering, travel (!), and spirituality. This is a nice example that STS may have a problem with respect to audiences. On the one hand, STS is too small a field to merit its own label, for example in bookstores. On the other hand, STS research is read by many different disciplinary (and interdisciplinary) audiences. Put in another way, STS scholars face an interesting but challenging situation when communicating their findings since STS potentially has a heterogeneous audience of outsiders, in addition to the insiders of the field. In addition, it is unclear how to differentiate between outsiders and insiders in STS.

On several occasions, I have argued the need to distinguish between interdisciplinarity understood as, on the one hand, an encyclopaedically oriented individually based undertaking, and on the other as a team effort of managing distributed but potentially additive knowledges (see, e.g., Sørensen 2010). Latour could, with some reservations, be seen as an instance of the first idea, which seems to resonate fairly well with standard STS practices. Obviously, there are limitations to omniscient knowledge practices. Harry Collins and Robert Evans (2002) usefully suggest the concept of interactional expertise to catch important features of this situation. They define interactional expertise as having sufficient competence to interact interestingly with participants from other specialities and carry out a sociological analysis of their practices (p. 254). They contrast this to contributory expertise, which means that one has to be an insider to the particular field of inquiry. To have contributory expertise in more than one field is very demanding. However, to acquire interactional expertise is more doable even if that also requires substantial effort.

To sum up, we face at least four ways of understanding STS as an interdisciplinary effort. First, following Klein (1996), we may see STS as meeting-place of scholars from a diversity of disciplines and specialities, engaged in border-crossing and bridge-building to explore science and technology. Second, Jasanoff (2010) proposes to see STS as a discipline that explores what is in-between (inter) other disciplines and specialities. Third, drawing on Collins and Evans (2002), we may consider STS a scholarly community whose interdisciplinarity relies on interactional expertise as the main tool of making sense of and translating between other disciplines of science and technology. Fourth and final, drawing on Weingart (2010), we could ask if the self-claimed interdisciplinarity of STS is just a cloak under which a diversity of disciplinary and sub-disciplinary interest are developed and pursued. How does STS in Norway compare to these four perceptions?

3. Towards a room of its own

During the 1980s, several initiatives were taken to develop STS scholarship in Norway, which eventually lead to the establishment of the STS centres in Oslo and Trondheim (Sørensen 1995). A common feature of these efforts was a fairly inclusive strategy with respect to scholarly involvement. For example, the initiatives to develop history of technology comprised not only historians, but engineers, economists, sociologists, ethnologists, and political scientists (Thomassen 1997). Thus, TMV (TIK) as well as CTS (KULT) were established from traditions where interdisciplinarity was a common feature. This also included impacts from the scholarly practices of fields like work life studies and gender studies. However, interdisciplinarity did not happen without controversy. Particularly in the case of history of technology, engineers and historians held different views about how to proceed (Thomassen 1997). In the end, the historians came to dominate this sub-set of STS inquiry but not completely. In STS more broadly, a fairly inclusive approach dominated. Interdisciplinary participation was a given feature in the establishment of Norwegian STS, at least if we understand interdisciplinarity as scholarly interaction of people with diverse disciplinary training. What were the consequences of this interdisciplinary recruitment to STS? To what extent do we observe interdisciplinarity in the resulting knowledge practices?

To begin with, if we look at the publication output of the people involved in the establishment of STS in Norway, we find that most of them published as individual authors or together with people of similar disciplinary orientation. Historians wrote with historians, sociologists with sociologists, with only a few exceptions. Still, the rather cynical proposal of Weingart (2010) that interdisciplinarity mainly is a way of funding the pursuit of disciplinary concerns does not quite match the Norwegian STS situation. Actually, the emerging scholarly practices fitted fairly well with Klein (1996) emphasis on boundary crossing and bridge building because there has been (and still are) considerable cross-disciplinary traffic in theory and methods.

A simple indicator of this traffic is the disciplinary diversity in the lists of reference of Norwegian STS scholars. However, strictly speaking, this is just evidence of cross-disciplinary reading not of interdisciplinary scholarship. The latter issue is more complex. Actually, I will claim that when one reads the scholarly publications of STS people in Norway, it is usually possible to identify disciplinary imprints that suggest that there are anthropological, historical, philosophical and sociological (or social science) versions of STS writing. However, there is still an STS flavour that distinguishes this writing from that of mainstream scholars from the disciplines. Typically, publications of the Norwegian STS community would not be recognised as mainstream contribution of a traditional discipline, even if they may be acknowledged as contributions to historical, sociological, anthropological, philosophical, etc. inquiry.

Another interesting and related feature is the development of care in the scholarly conduct with respect to disciplinary boundaries within the STS community. I know this particularly well from my own institution, CTS (KULT), where this practice emerged from conflicts regarding use of theory, methodology and style of writing. In particular, we had to learn that historically and social science oriented STS scholars often pursued similar agendas in different ways. This produced a kind of competence that Michelle Lamont (2009) calls cognitive contextualisation, namely the skill of relating to pieces of scholarship on their own scholarly premises. Cognitive contextualisation is important in interdisciplinary communities to avoid unproductive disciplinary conflicts in scholarly exchanges. Usually, papers authored by historians would be discussed with that feature of origin in mind, similarly with anthropologists and sociologists, so that the papers receive comments acknowledging different approaches and styles of writing. This does not mean that features originating with disciplines outside STS should not be discussed, but such debates seem best to be conducted while acknowledging the disciplinary border crossing involved.

The ability of Norwegian STS scholars to do cognitive contextualisation was also related to the development of interactional expertise regarding the neighbouring disciplines. A social science oriented STS person would normally not be seen as a contributor to, e.g., history of technology or history of science, and vice versa. However, there would be recognition of what was involved in historical and social science oriented STS scholarship that allowed fruitful interaction.

What about Jasanoff's view of STS as a discipline? Actually, STS in Norway has – at least institutionally – pursued a disciplinary path, in particular with respect to teaching. The previously mentioned recognition of the Norwegian Association of Higher Education Institutions through the establishment of an academic council for Science and Technology Studies is evidence that this pursuit has met with some success. All three university centres have established STS teaching programmes. SVT in Bergen has a PhD programme. TIK in Oslo has two master programmes and a PhD programme in STS and Innovation studies. KULT in Trondheim has a master programme, a PhD programme and a one year undergraduate programme in STS. These programmes have mostly been started during the last decade. Annually, 25-35 MAs and 5-10 PhDs graduate. However, there is no Norwegian STS society and no STS journal. In terms of teaching, Norwegian STS is beginning to look like a discipline, but what about research? So far, I have painted an ambiguous picture. Is Norwegian STS research in the final instance a pursuit of concerns related to traditional disciplines? If not, what kind of interdisciplinarity may we observe?

4. A broad church?

Some STS scholars in Norway publish in disciplinary journals of history, political science, sociology, etc. However, this pattern of publication is fairly marginal. The majority of STS publications are found in other outlets. Actually, when we

look at the journals where Norwegian STS scholars publish, the most striking feature is diversity. We do of course find papers in STS journals like *Social Studies of Science* and *Science, Technology & Human Values*, but not very many. Rather, the publications of Norwegian STS scholars are found in quite specialised, interdisciplinary and thematically oriented journal and over a wide spectrum of topics.

Thus, the typical Norwegian STS paper is addressing concerns in other interdisciplinary areas. We find contributions to fields like gender studies, energy studies, building studies, environmental studies, climate science, policy studies, media studies, information and communication technology studies, disability studies, ethics, social studies of genetics, etc. This suggests that Norwegian STS publications are border crossing, but not so much with respect to traditional disciplines as to other interdisciplinary fields that are defined mainly through topical interest. What kind of interdisciplinarity is this?

The way Norwegian STS publications from the last decade are spread thinly over a fairly large number of interdisciplinary, topical journals – about 100 different ones – suggests two features of Norwegian STS scholarship. First, that it is mainly applied and problem-oriented. Second, that it is not so much STS as belonging to other interdisciplinary fields. Nevertheless, these two assumptions are misleading. While the dichotomy of basic versus applied research never was an STS favourite, we should note that many of the publications pursue theoretical agendas. Moreover, these theoretical agendas tend to be either distinctly STS-ish (to the extent we may use that label) or involving the use of STS reasoning when addressing concerns of other interdisciplinary areas. The typical paper would contain at least some reference to core STS literature, like actor-network theory or co-production theory.

Let me give a few examples. Kristin Asdal has in several publications addressed the making of environmental policy in Norway by combining a historical approach with the use of actor-network theory. This has resulted in an interesting development of the Foucauldian concept of political technologies (see, e.g., Asdal 2008, 2011). Thomas Berker (2005) uses actor-network theory to address the issue of energy efficiency in buildings. More particularly, he draws on some recent developments of ANT – political ecology (Latour 2004) and object lessons (Law and Singleton 2005) – that Berker argues to be more useful as tools to account for the fluidity of energy efficiency in buildings without referring to essences and dualisms. Ingunn Moser has made use of ANT to develop new perspectives on disability. She has been concerned with the way disability is enacted in everyday life, raising typical STS concerns about ordering and differentiation (Moser 2005, 2006).

In this manner, Norwegian STS scholarship provides evidence of a disciplined interdisciplinarity not only with regard to teaching programmes but also with respect to publications. This runs counter to the claim of Martin et al. (2012) that STS research is fragmented. The spread of publications over a large number of journals mostly outside the (small) STS core should rather be interpreted as evidence of interactional expertise (Collins and Evans 2002) and that Norwegian

STS really performs as an ‘interacting field’. Instead of seeing STS as fragmented, there are good reasons to claim that STS is rhizome-like in the sense that the field is spreading through interaction with, but also in-between, a large number of disciplinary and interdisciplinary fields.

We find two more indications of the latter point in Norwegian STS research. First, the STS centres have proven surprisingly successful in attracting funding from a wide range of research programmes. The dominant source has been Research Council of Norway, where we find STS scholars obtaining funding from programmes addressing environmental concerns, sustainable energy, information and communication technologies, culture, new materials, and climate change issues – to mention some of them. This success is not just evidence of the potential of STS to be a relevant mode of inquiry into a fairly large number of scientific – including engineering – fields. It also supports the claim of STS scholars that they have developed interactional expertise with respect to many fields.

The rhizome-like quality of STS is also evident from the fact that STS is drawn upon by scholars outside of the core STS centres. There are STS scholars located in other institutions like departments of sociology, anthropology and social science. The contract research institute Nordic Institute for Studies in Innovation, Research and Education (NIFU) employs a number of STS scholars who for a long time has contributed to and participated in the international STS community. Still, we find references to core STS literature in a much wider community of Norwegian social scientists and humanists. There has also been a marked increase of participation in international STS meetings by scholars outside of the core STS centres.

Does this mean that Norwegian STS will develop through a broad church approach, like Jasanoff (2010) describes? This claim is difficult to assess, above all because of the lack of a reasonably well-defined Norwegian STS arena, like conferences, journals or an association. As I have argued earlier, what is visible is a process of institutionalisation focused on the development of education programmes, related to the three core STS centres. This gives the impression of Norwegian STS as discipline-like. If there is a broad church tendency, this is rather enacted on the international arena through the participation in the meetings of Society for Social Studies of Science and European Association for the Study of Science and Technology of people from a diverse group of disciplines and specialities.

In fact, the lack of a reasonably well-defined Norwegian STS arena may be explained by the fairly strong international orientation of STS scholars in Norway. Much of the publication efforts are addressing an international rather than a national audience. Also, in terms of research collaborations, Norwegian STS scholars tend to work more often with STS scholars from other countries than Norway. In this sense, we could say that Norwegian STS is an open scholarly community. Not by being broad church and fragmented, but by being more concerned with interacting with STS scholars abroad than with constructing a tight Norwegian STS community.

Conclusion: a disciplined interdiscipline

In the final instance, I think it is fair to describe Norwegian STS as having a distinct interdisciplinary orientation. However, as we have seen, the implications of such a claim are not obvious. In this paper, I have discussed what this way of characterising Norwegian STS might mean and some consequences of the implied mode of operation. Previously, I identified several possible features of interdisciplinarity in relation to STS: disciplinary efforts in disguise (Weingart 2010), border crossing and bridge building (Klein 1996), interactional expertise (Collins and Evans 2002), a disciplined effort to research unexplored (or underexplored) concerns in-between other disciplines (Jasanoff 2010), and fragmentation (Martin et al. 2012). None of these characteristics fits exclusively. Weingart's characterisation does not coincide very well with my observations of Norwegian STS, and at least some of the noted features, contradict the claim of Martin et al. about fragmentation. However, the three other suggestions make sense. STS in Norway is engaged in border crossing and bridge building, it is continuously developing interactional expertise, and it shows distinct disciplinary features, in particular with regard to education programmes at the three main universities in Bergen, Oslo and Trondheim.

I believe the engagement in developing STS education programmes is a driver with respect to institutionalisation and the disciplining of the Norwegian STS community. This is because the making of such programmes raise concerns about what are core competences of STS, and these concerns – discussed in relation to developments of STS internationally – implies some level of standardisation. This does not mean the education programmes are very similar, but there are important overlaps in terms of curricular content.

I have also argued that the publication efforts of Norwegian STS scholars have a definite STS core, even if most of the publications are published in interdisciplinary, topic oriented, non-STS journals. Thus, it is above all Jasanoff's proposal of a disciplined STS that seems to provide the most interesting way of characterising the Norwegian scene. Also, her way of outlining the interdisciplinary features of STS as above all related to exploring concerns inter other disciplines make good sense in the analysis of Norwegian STS. This means that the development of interactional expertise is a central feature of the research activities.

STS definitely has rhizome-like qualities as evidenced by the spread of STS into many areas of topical inquiry as well as the increasing use of references to STS literature outside the STS community. I believe these are strengths rather than weaknesses. The important distinction that Jasanoff makes between a broad church and a more disciplined approach to doing STS, appears in the Norwegian context to have an ironic twist: the broad church approach is enacted on the international scene, while within Norway, a disciplined approach dominates.

Maybe this is a convenient situation for STS, at least seen from the perspective of a small country like Norway. In the national context, the concerns of teaching

STS points towards discipline and standards. On the international scene, a broad church approach creates a productive melting pot. This suggests that the characterisation of Norwegian STS as a disciplined interdisciplinarity is a fairly stable description, while the rhizome-like qualities of STS research will contribute to a growing topical scope of scholarship.

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Knut H. Sørensen Norwegian University of Science and Technology
Department of Interdisciplinary Studies of Culture
7491, Trondheim, Norway
Email: knut.sorensen@ntnu.no

