

Crafting a Career in STS: Meaning Making, Assessment, and Interdisciplinary Engagement

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Abstract

Drawing on her own biography, Ruth Müller opens her contribution by reminding us of the strong interdisciplinary roots and entanglements of STS as a field, as well as of its emancipatory political agenda. This rich history creates multiple valences for defining the worth of work in our field, ranging from scholarly excellence over successful interdisciplinary collaborative engagement to assembling matters of care and concern. Building on this, she analyzes how current indicatorized career dynamics render it increasingly difficult to derive a sense of meaning from one's own work that builds on a successful integration of these multiple valences. She calls for developing "standards of our own," that is, ways of defining quality and processes of accountability that do better justice to the multiple valences of our field.

Keywords

STS; care; meaning; metrics; evaluation; interdisciplinarity; academic career

Origin Stories

What does it mean to be an STS scholar in a contemporary university? What are the demands of building a career in this field at a time of quantitative, indicator-based academic assessment? To me, some of the answers to these questions are entangled with another set of questions: What is STS? What is its purpose? Why should it be part of teaching and research in contemporary universities?

In the list of contributors to this debate section, I am the most junior. Having obtained my PhD in STS in 2012, I started a position as assistant professor for science & technology policy at a new STS center at a technical university in Germany in 2015, where I currently lead a small research group. Based on my research interests and my initial training in molecular biology—and much to my delight—this professorship is a co-appointment between the STS center and the School of Life Sciences at my university. While in other fields this might be a more unusual

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combination, for an STS scholar it is one of the many institutional hybrids and multiple valences that sustain our field.

One of the benefits of being co-appointed at the School of Life Sciences is that my official position there opens doors for integrating STS courses into life science curricula. When I introduce life science students to STS thinking, I usually give a brief introduction to the field of STS in the first class. Of course, there are many different and some equally plausible origin stories for the field of STS. The story that I tell is one that talks about the field as on the one hand originating from engagements with science and technology in disciplines like sociology, philosophy, history or anthropology. On the other hand I introduce the field as, particularly in its current form, significantly shaped by interdisciplinary engagements by scholars originally from the STEM fields. Among the key figures of STS today, there are many who initially trained to be biologists, chemists or physicists, and were later drawn to explore the role of their field in society and politics, often motivated by the pressing sociotechnical issues of their time—such as nuclear power, environmental pollution or emerging biotechnologies. Many of these scholars were well placed in their fields and could have easily pursued successful careers in their home disciplines. Instead, they set out to re-craft their scholarly identities, build on political commitments rather than rigorous training and engage the relationships of science, technology and society as both a “matter of concern” (Latour 2004) and a “matter of care” (Puig de la Bellacasa 2011). Gradually, a field emerged out of these engagements; handbooks were written, conferences grew larger, and departments and PhD programs formed. This process happened more easily in some places than in others, often in relation to how important a traditional disciplinary formation is for academic career development.

My own academic biography is interdisciplinary in this specific sense. My first field of study and work was molecular biology. My move to STS was motivated by the sustained excitement that I experienced when I first discovered that one could explore the deeply political character of knowledge production and technology development as an academic practice. To this day, I find myself drawn the most to work in STS and related fields that has explicit political stakes. When I say political I do not necessarily mean work that engages with capital P “Politics.” Rather, I mean work that is political as it pays attention to how science and technology shape contemporary possibilities of living, for whom and how; or that explores how the apparatuses of knowledge production and technological invention we employ are deeply shaped by the societies we live in, their norms, values and power structures. These are stakes that are particularly expressed in some fields of STS, such as feminist or postcolonial STS, but that are a much more widespread concern for many STS scholars. These stakes can guide teaching as much as research; and they can be drivers of outreach, public communication or community work for STS scholars. Such political engagements are in no way specific to STS. There are many other fields in the social sciences and humanities, and of course the natural sciences, engineering and medicine, too, which engage deeply political topics. With those fields, I think STS currently shares a particular challenge: how to maintain a sense of meaning in and of our work in a culture of competition and quantification?

Meaning

I employ the possibly old-fashioned term *meaning* as a figure to think with here and offer it as a possible alternative to terms such as relevance, impact and excellence that are currently high in circulation in science and science policy. Meaning is different from all of these terms but can be understood to incorporate some elements of each. I am drawn to the term *meaning* for exploring the tensions in academic work practices in relation to the contemporary metric-based regimes of valuation in academia for a number of reasons. First, I am drawn to its unspectacular and mundane ring: surely, academic work is supposed to have meaning. Second, my interest in meaning is related to my research on how career norms impact social and epistemic practices in the life sciences: often, it was the meaning of their work beyond their own career progress that seemed to have become elusive for the hard working and often indeed very successful young scholars that I and my colleagues have interviewed (Fochler, Felt and Müller 2016; Müller 2014; Müller and Kenney 2014). Phrased as a question to her peers in a group interview setting, one female scientist expressed this sentiment as follows: “Do you think that the structure of a scientific career is such that it tends to make you forget why you’re doing the science?” “Career” and “meaning” here appear as oppositional. Third, I am interested in the term meaning as it invokes the personal and the situated. It provides an important contrast to other terminologies so often used to describe the quality of academic work—such as excellence and impact—that aim to tie themselves to the objective and the measurable. Akin to care, meaning is a relational practice, a doing and not a quality to be possessed (Puig de la Bellacasa 2011; Martin, Myers and Viseu 2015). Fourth, for me, to raise the question of meaning is to express the frivolous desire to remain *respons-able* (Barad 2007) to the question “cui boni?” in relation to my own work (Puig de la Bellacasa 2011; Star 1991). To whose benefit is it that I am working? What kinds of worlds am I helping to raise? Susan Leigh Star’s question, Puig de la Bellacasa (2011), argues, is more than the instruction to consider critically who benefits from our practices. It is the invitation to locate possibilities of care within our practices and to ask the difficult question: *how to care?*

In my own practice I find that meaning emerges when I find tentative but practical answers to this ever-shifting question and can translate them into momentary gatherings of things and people that explore how we can relate to and interfere with our technoscientific worlds critically and caringly. Such moments are not bound to a specific sphere of academic engagement: they can emerge in teaching, in research and writing, as part of institution building practices and within interdisciplinary dialogue.

Meaning and Metric Assessment

Why do I call it a frivolous desire to raise this question of meaning? Here I want to come back to the question the young life scientist above posed to her peers in the group interview—“Do you think that the structure of a scientific career is such that it tends to make you forget why you’re doing the science?”—and this time I switch sides and participate in answering her question. Indeed, I share her concern that the metric assemblages increasingly used to assess and evaluate academic work have developed a life of their own that tends to distract from rather than encourage a focus on

meaning. Much of it has to do with what Ulrike Felt (2017) calls the current “chronopolitics” of academic life: the ticking clocks of a production-focused paradigm that values that which is countable, and tends to make invisible that which is not countable (Müller 2014, see also Vann 2017). A focus on meaning is easily lost when we experience continuous pressure to be already done with the current task, translate it into a measurable unit of output and move on to the next. When we are regularly encouraged to not *lose too much time* on all the indispensable categories of work that resists this translation into the countable—may it be teaching, collegial support, institutional labor or other academic service tasks such as review work (O’Neill 2014; Mountz et al. 2015). Working in and with the current “speed frenzy” of academic labor all too often raises the question: *Cui bono currimus?*

Meaning is easily displaced when we rush through the many lines of an overfull to-do list. It needs time and attention to be crafted, tested and sustained. It thrives on connections: between knowledge, self and others. Meaning-making is relational work: how do we count relations? It requires temporal orders that give room to experimentation; that provide the possibility of doubling back on ourselves to recursively investigate what it is that we are doing and allow to possibly “name what [we] are doing in new and useful ways” (Verran 2001, 237). Meaning requires the possibility to reflect on, but also to disrupt our ongoing work practices without necessarily being able to offer any *ersatz* right away (Müller and Kenney 2014). It requires the possibility of making ourselves available to new gatherings of things and people as they acquire meaning in our work. None of these practices are encouraged by the commonplace quantitative metric-centered forms of assessment: instead, investing in such meaning-making practices often requires finding ways of temporarily shielding oneself (and others) from the structural pressures towards linear productivity exerted by contemporary forms of assessment (Davies and Horst 2015; Fochler 2016)—a precarious endeavor bound to fail in many cases. As much as many of us are used to these practices at this point, this is a highly paradoxical situation.

Multiple Valences, Interdisciplinarity, and the Necessity of Standards of Our Own

What does this mean for STS scholars in particular? Along with numerous other fields that are politically engaged, meaning might be a particularly important category for many scholars in our field. As there are not yet necessarily any clear-cut career paths in or outside of academia related to STS training, few of us enter this field in order to “make a career” in any classical sense. Many are drawn in by personal, intellectual and political interest—some specifically by the possibility of working across academic fields in rather radical ways, combining an interest in the natural or technical sciences with a desire for critical social science inquiry.

The work contexts of many STS researchers are shaped by this kind of interdisciplinarity, for example when STS researchers are located in natural science or engineering departments,

² Though there are many fields of possible application of STS knowledge and I am not too worried about graduates finding jobs.

regularly acquire their funding conjointly with natural scientists or engineers (in ELSA/ELSI or Horizon 2020 type calls) or simply when their work depends heavily on the collaboration of natural scientists or engineers. In these interdisciplinary contexts, establishing and re-establishing the meaning, purpose and value of our field is everyday business. STS often thrives—when it thrives as a field—on the argument that other science and engineering fields need us: as a critical instance that reflexively assesses the state of their affairs; that brings in “society”; and points out social, ethical or political problems. Here, the meaning of STS is often articulated as a category in relation to other scientific disciplines: as the value that STS work has for improving the practices of other disciplines, and by proxy for society. This approach opens many doors for STS and creates important interdisciplinary engagements. For me, this kind of work and its possible impact is one of the key reasons to be an STS researcher. But at the same time this strong focus on interdisciplinary importance partially undercuts the idea of STS as a field in its own right.

This can further complicate the often already tense relationship between assessment and meaning making practices in STS. During their career development STS scholars are often held to standards different from those of the scholars in the fields they are researching: in many cases, they need to prove both their *usefulness* to other science and engineering fields and *excellence* in their own field. In this mode of assessment, we encounter a consequential split: in terms of career assessment, interdisciplinary engagement often becomes *something different* from excelling in STS. The first represents, for many, a prerequisite for having a place in the university to begin with, as their value for the institution and for society is defined primarily through their relation to the natural and engineering sciences. Regarding the second, what it means to excel in STS has become increasingly narrowly defined by the same performance indicators that dominate other fields: publications in international peer-reviewed ranked journals. As a result, as in many other fields, the key journals of STS have become desperately overcrowded, with long drawn out review processes and significant publication back logs. Journals that were initially founded to provide an outlet for a field in formation have now become obligatory passage points for the careers of a rapidly growing community of scholars identifying as STS.

In a culture of speed frenzy, this means that STS scholars often need to balance two important but equally time-consuming tasks to move ahead: sustained interdisciplinary engagement and high profile publication. While these two tasks can support each other, they are equally often at odds, competing for focus, time and dedication. Balancing these activities often requires well-crafted circles of engagement, disengagement and translation and a careful management of expectations—one’s own and that of other parties involved. I would argue that one of the strengths of STS work is specifically this multi-valence; its ability to travel between spheres, encourage conversation, enable novel gatherings of things and people in ways that can translate matters of fact into matters of care. These are often slow and recursive practices,

³ Ethical, Legal and Social Aspects/Issues of Science

⁴ See Viseu (2015) or Fitzgerald and Callard (2015) for a critical review of these forms of placement

practices of interference and intervention; these practices that can be accounted for (Kenney 2015), but they do not necessarily produce entities that are easy to count.

Crafting sustainable spaces for STS work in the university might require taking this specificity into account. In terms of assessment, it might require that we scrutinize what kinds of roles we as a community of scholars imagine for STS within the academy. While we can play multiple roles, we cannot in good faith play multiple roles at a hundred percent and more each. As many other fields, we need to consider what a culture of over-commitment and potentially overpromise might do to the possibilities of meaningful academic practice and identity within our field.

For me as a researcher on a tenure-track my interdisciplinary engagements are always also to a certain extent an exercise in trust that we as a community can develop suitable assessment standards for our own work. As a faculty member of both an STS center and a natural science faculty, I am eager to use this placement to foster engagement and develop interdisciplinary connections in teaching and research. Some of this work is easily countable, some of it not. Some of the interdisciplinary work I consider most meaningful might be indeed rather hard to count. Looking ahead requires trust that institutional actors as well as peer reviewers will be able take into account also that which is not easily expressed in numbers, but makes a difference nonetheless. This implies, among other things, that we as an STS community develop, communicate and advocate for assessment standards of our own. We need to define quality in ways that do justice to the multiple valences of our field and to the heterogeneous practices of engagement and meaning making we might want to foster.

In this context, I find it particularly important to advocate for valuing and evaluating not only work *products* but also work *processes*, particularly when it comes to interdisciplinary work. The slow processes of interdisciplinary communication, sensitization and community building are among the work practices that are particularly hard to measure in metric terms. They are by definition processes full of uncertainty; their viability is all too easily limited on both sides of the table by questions about what kind of countable product will result from this engagement. As STS reviewers and peers in institutional evaluation we can work to make these processes visible nonetheless. We might have the opportunity to request evaluation materials that do not only document products but also processes, for example by advocating for including narrative forms of accounting. If this is not possible, we can use venues such as hearings to ask questions that give room for discussing process-related qualities of the candidate.

STS has created a place for itself in the academic landscape particularly by arguing for its interdisciplinary importance and its potential to help create what Nowotny and co-authors (2001) have called a more “socially robust” science. If we truly believe in this potential of our discipline, we need to more loudly advocate for assessment standards that give meaning and value to such processes of engagement instead of settling for the familiar territory of the countable.

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Author Biography

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