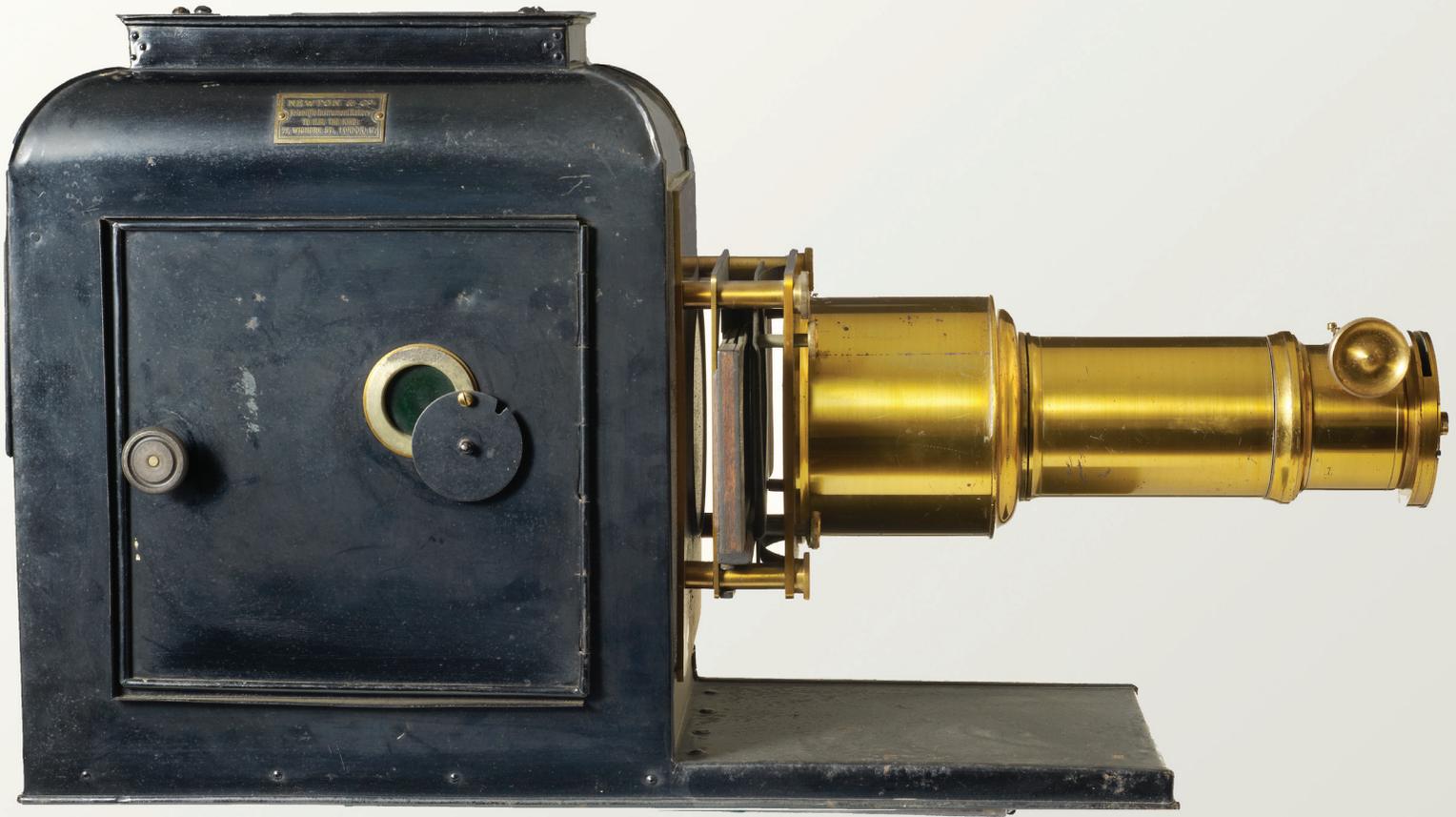


*Philosophy of Science  
in Practice*  
Newsletter

No 7 ∞



# From the Editor

Dear Friends and Colleagues,

Let me be one of the first to say welcome to Aarhus and SPSP's Fifth Biennial Conference. If this is your first or fifth time at SPSP I hope you will enjoy it. My first SPSP was in Minneapolis and I remember it distinctly because it was the first time that I really felt...at home in philosophy. This society created a place for me, a sense of: these are my people; I have something to say to them. The importance of such a professional tether cannot be underestimated and I think I am not alone in finding it here in our community. To that end I want to thank the society's organizing committee and the local committee for working so hard to put on what promises to be another successful conference and...homecoming.

I also want to encourage you to attend the Newsletter lunchtime meeting on Thursday at 12.30. Things are changing with the newsletter: I am stepping down as editor-in-chief, our editor-at-large/designer, Jordan Bartol is also stepping down, two of our regular contributors Laszlo Kosolosky and Liz Irvine are also leaving to pursue other things. As a result there are a lot of opportunities to get involved and help carry on what has become quite a successful venture. To this end, let me say an enormous thank you to Jordan, Laszlo, Liz and Sophia Efstathiou who have been working with me since the conference in Exeter to put this newsletter together. Would that every committee I am on was filled with such talented, kind and hardworking individuals.

Enjoy the conference!  
Leah McClimans

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# Talk of the Town

*From national meetings to intimate workshops, our team has the details on this summer's academic events.*

## BIENNIAL MEETING OF THE PHILOSOPHY OF SCIENCE ASSOCIATION

*Chicago, IL  
6-9 November*

November 2014 saw the biennial meeting of the Philosophy of Science Association, held jointly with the annual meeting of the History of Science Society, in chilly Chicago. Both the papers presented and the workshops and special events suggest that PSA attendees are more concerned than ever about the details of scientific practice, not to mention about ways the philosophical work they do might have broader impacts in the world. The sessions I attended drew lessons from primatology and archaeology, from GMO controversies and the updating of the DSM, from hippocampal neurons to miasmas, connecting scientific concepts, models, and experiments to broader questions about epistemic standards, causes, and explanations (to name only a few). The well attended evening session “Bridging the Philosophy/Science Divide: Getting Philosophy of Science Heard in Science Communities” grappled with the question of what philosophers of science might have to offer scientists, and of how to make the contacts and build the relationships that might foster these

exchanges. Another evening event organized by the Joint Caucus of Socially Engaged Philosophers and Historians of Science (JCSEPHS) showcased a wide variety of activities with which philosophers and historians of science are engaging with publics — and included trading cards offering tips for similar projects. (You can find the trading cards online at <http://jointcaucus.philsci.org/2014-jcsephs-event/>) Perhaps it's my confirmation bias talking, but my impression is that PSA is showing clear signs of the influence of SPSP, and I can only regard that as a good thing.

Fast-forward to February 2015, which saw the inaugural conference of the Citizen Science Association in balmy San José, California. The conference brought together a huge number of scientists, educators, patients, and amateur enthusiasts, along with a handful of ethicists and at least one philosopher of science. Although many of the sessions involved strategizing about ways for organizers and practitioners of citizen science initiative to learn from each other and “build synergy,” many of the topics swirling in the air

would provide fertile intellectual ground for the SPSP crowd: from the various knowledge-building methodologies that rely on non-experts as well as experts, to the ethical issues that arise when the citizen scientists are also human subjects, to questions about the extent to which massive collection and classification of data prior to clear categories may influence the development of scientific approaches and understanding. Given that the scientists at CSA were already thinking about questions like how to engage broader publics in the full life-cycle of science, this strikes me as a group ripe for infiltration by SPSP folks.

Just as CSA wound down, the San José Convention Center was taken over by the annual meeting of the American Association for the Advancement of Science. As one might expect, the program was packed with everything from cutting edge scientific findings in an array of scientific fields, to ripped-from-the-headlines issues like how scientists and public health officials were working together to coordinate responses to the Ebola crisis in West Africa, to discussions of how public records laws and the Freedom of Information Act have been impacting scientists and scientific practice, especially around research topics (like climate change and genetically modified crops) that the public sees as controversial. I appreciated

the wide array of choices, but I was also struck by how little interaction there seemed to be between scientists and practitioners from different fields. For example, there were two excellent sessions on scientific integrity, whose panels and audiences were packed with the most recognizable researchers in the field ... but there were few conference attendees in the room for either session who didn't work on scientific integrity, despite the fact that these issues ought to be of interest to anyone trying to practice ethical science. Similarly, a session on fostering diversity in science was attended almost entirely by people whose presence in a scientific community would be viewed as adding diversity to it; the white male AAAS attendees apparently thought that this session would not have anything useful for them. I would love for a critical mass of SPSP members to start coming to AAAS meetings, not just to engage with the different pieces of scientific practice on display, but also to model wide-ranging interests and fruitful cross-pollination for the scientific regulars.

Of course, no conference is quite like the SPSP, but if we keep spreading our collective tentacles, we can bring the SPSP spirit to more of the conferences we attend in the long two years between SPSP meetings!

*Janet D. Stemwedel*

## On the Cover: A Magic Lantern

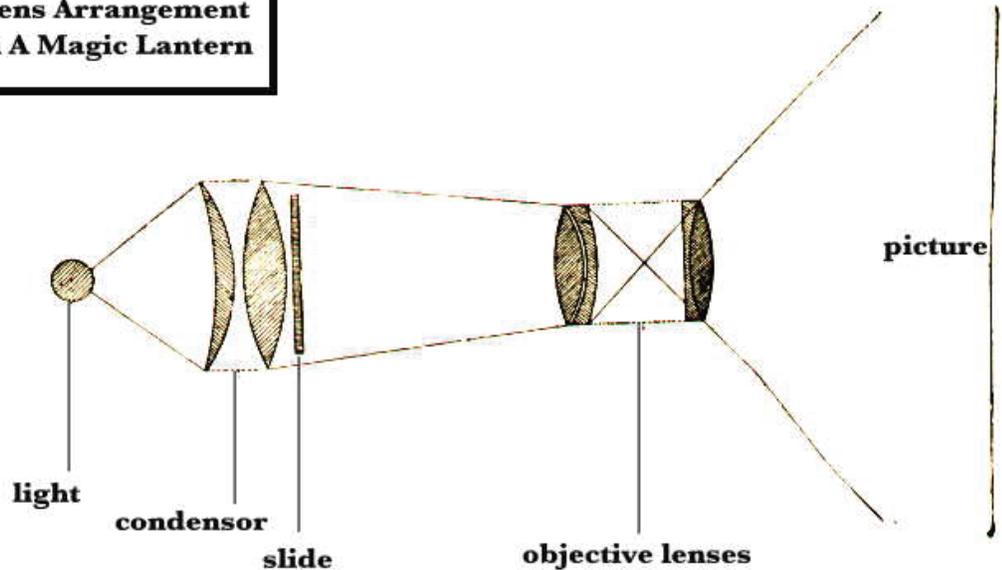
Kiara White

Magic lanterns are considered a predecessor to the modern slide projector. They function by using a condenser lens to focus artificial light (e.g. candle light, lime-light or later electric light) onto a glass slide, the light rays then passing through an objective lens system which projects an enlarged version of the slide's image onto a screen or wall.

The historical development of these instruments dates back to at least the 17th century, with the Dutch scientist Christiaan Huygens often being cited as a key figure in their invention. The peak of their production was during the second-half of the nineteenth century. They provided a popular form of entertainment in both public and domestic settings. Combining slide projection with live narration, music and other special effects, magic lanternists delivered highly successful entertainment spectacles, including phantasmagoria (gathering of ghosts) shows. Slides could have moving parts, and the use of two lanterns in conjunction with pairs of slides could produce 'dissolving' (transforming) effects.

It was this ability to produce projection effects that in the days before moving film would have appeared miraculous to audiences that gave magic lanterns this moniker. In scientific or educational settings however it

### Lens Arrangement In A Magic Lantern



The lens arrangement in a Magic Lantern. (credit)

was more common to refer to them as optical lanterns, or simply lanterns. After the moving picture was introduced in the late nineteenth century the popularity of magic lanterns began to decline, but in educational settings their use continued for longer (we think that the use of magic lanterns continued in the Biology department at the University of Leeds until as late as the 1960s).

Lanterns provided a convenient way of displaying images to a large audience. Ready-made educational slides featuring a wide range of topics could be ordered from catalogues, or lecturers could have them specially produced using images of their own work.

*learn more about  
magic lanterns over at  
the HPS Museum Blog.*



A Junior Praestantia Lantern.  
Photo: Esther Lee

# Building Bridges in Copenhagen: Philosophy of Science and Science Education

Sara Green

*Denmark is known for the big bridges crossing the waters between the largest islands and the main land. Can Danish researchers also help bridge the theoretical and institutional gaps between philosophy of science and science education?*

Hanne Andersen (chair of the SPSP2015 LOC) has recently been appointed head of Department of Science Education at University of Copenhagen. In her new position, she aims to make research in philosophy of science more relevant for scientific practice and for science education. Philosophy of science research is already an integrated part of the department with a small research group for Science Studies consisting of Claus Emmeche and Mikkel Willum Johansen (presenting at the SPSP2015). With Hanne's appointment the aim is to expand the group so as to create a better research environment for practice-oriented philosophy in Denmark. So far, the group has been extended with a post.doc., Sara Green (also presenting at the SPSP2015). Sara's new project illustrates the advantages of combining different approaches in the study of new interdisciplinary developments.

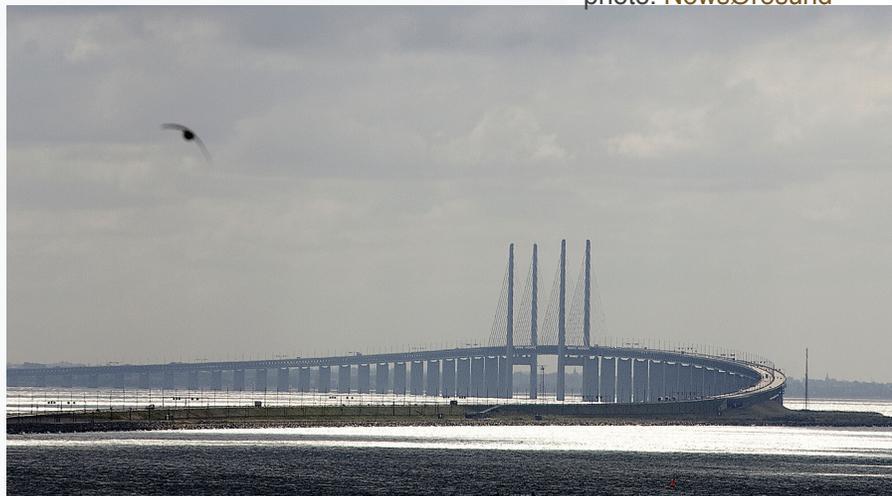
Sara analyzes the epistemic and social implications of the development of systems medicine. The emergence of systems medicine reflects a growing demand for medical research strategies and health practices that can account for variation among individual patients. In particular, the notions of personalized and precision medicine manifest the vision that medicine in the future will be based on integration of vast amounts of patient-specific data in computational models. Aside from epistemic challenges pertaining to data integration and interpretation, Sara explores how the research approach is intertwined with new socio-medical strategies focused on disease prevention. The personalization of medicine implies that patients take center stage as data providers, as consumers of health technologies and as informed decision-makers about health-choices. Interpreting information about health-states from personal genomics and extensive self-monitoring, however, places higher requirements for

health- and genetic literacy of the general public. Together with the new roles for doctors to assist in genetic counseling, the new trends therefore involve new challenges and topics for science education and science communication.

The demands for increased science literacy also involve important social aspects through the outsourcing of data collection and research to commercial biotech companies. In the context of direct-to-consumer genomics, philosophers can play an important critical role in examining the relation between liberal marketing of health technologies and communication of genetics and disease information (see also Bartol, *Sci & Educ*, 2013). Moreover, the increased focus on disease risk may transform our conception of the individual and of disease and health in general. Sara's research topic therefore exemplifies how a philosophical analysis of scientific strategies is embedded in a broader social context. Similarly, Hanne's research focuses on aspects of interdisciplinary collaboration that are socially relevant. In the following years, Hanne (presenting at the pre-SPSP2015 workshop) will continue her work on interdisciplinarity, especially on how to understand accountability, quality control, expertise and evidence within interdisciplinary research.

More information about the Department of Science Education at University of Copenhagen can be found at: [www.ind.ku.dk](http://www.ind.ku.dk).

The Øresund Bridge, Connecting Copenhagen & Malmö  
photo: NewsØresund



## Exposing the Orphans

Allison Marsh

*In the fall of 2012, I entered into an experimental collaboration with science writer Lizzie Wade. The goal was to write a feature-length (6,000 word) essay in the creative nonfiction (CNF) style. The project was part of the NSF-sponsored “To Think, To Write, To Publish” initiative to help bring science policy issues to a broad audience of general readers.*

As much as I thought I liked the concept, at the end of the first weekend I was ready to throw in the towel. My initial reaction to the CNF-types was that they have no problem making things up. That might be a little harsh and judgmental, but needless to say, we had different expectations about what quotation marks meant.

However, I stuck with the process. After a failed false start on a story about the 20th anniversary of the cancellation of the Superconducting Super Collider (salvaged in a blog post [here](#)), my writing partner and I settled on a story about my work in the engineering collections at the Smithsonian National Museum of American History. Sadly, these collections are one of the orphans.

Orphans are collections that no longer have a dedicated curator. To be clear, at a museum of caliber of the Smithsonian, orphans are in no immediate danger. But museum directors don't want to admit they don't have the staff to care for their collections; they don't want to air their dirty laundry. But an open secret in the museum world is that orphans exist almost everywhere. I wanted my article to raise awareness of the challenge facing one of the leading research museums in the world.

Did it work? In the summer of 2014 “Collective Forgetting: Inside the Smithsonian’s Curatorial Crisis,” was

simultaneously published in Issues in Science and Technology Policy and Creative Non Fiction and **made available fully online**. The worldwide print circulation of this article neared 20,000 copies and received thousands of online views from unique visitors across the world in multiple languages including Australia, Brazil, Cambodia, Canada, Columbia, Denmark, England, India, Israel, Kenya, South Africa, the United States, and 61 other nations Thanks to Lizzie’s connections, Madeline Brand interviewed me on KCRW, Southern California’s flagship NPR station. I continue to receive notes from people at museums all over the world, telling me how their institutions’ own curatorial crises are threatening the future of their collections. For me, this is beginning to look like real impact. As far as reaching broader audiences goes, the experiment was a resounding success.

Five months after “Collective Forgetting” went live, I received an email from Art Johnson. Art is Professor Emeritus of Bioengineering at the University of Maryland, College Park and a fellow of numerous acronym-laced engineering organizations (ASABE, ASEE, AIMBE, AIHA, BMES, IBE, IEEE). He had read the article in Issues and was moved to action. He sent copies to people in the American Society of Agricultural and Biological Engineering suggesting they endow a position of agricultural technology. Response was tentatively positive, but they need to know how much it will actually cost.

This was exactly the kind of reaction I was hoping to inspire with “Collective Forgetting.” This was the power of passionate narrative. Not only did we reach people who were just looking for a good story, we connected with people who were in a position to make a real difference. I forwarded Art’s email to everyone at the NMAH—the Director of Development, the Director of the Museum, even then-Secretary of the Smithsonian Wayne Clough.

As for the experiment with the genre

of creative nonfiction, I think I've become a convert. I will still uphold the professional standards of my discipline for research and scholarship, but I love the emotional response I get from the narrative style. There is a power to storytelling that is irresistible.

Excerpt from:  
*Collective Forgetting:  
Inside the Smithsonian's  
Curatorial Crisis*

When I arrived at NMAH in January of 2013, I felt as if I were reuniting with old friends. I had spent significant time in the engineering collection as a graduate student while researching my dissertation on the history of factory tours. Now, many years later, I spend much of my time in the classroom, lecturing to uninterested undergrads on the history of technology or pushing graduate students to think more broadly about the purpose of museums. I was looking forward to the chance to get my hands dirty, inspecting artifacts and doing real museum work.

I had underestimated the actual level of dirt. Despite the collections manager's best efforts, construction dust from a building improvement project had seeped through the protective barriers and coated archival boxes filled with reference materials. As I pulled items off the shelves, puffs of it wafted up to my nose. My eyes watered and my nose itched as I wiped away the new dust that had silently settled upon the old. The strata of grime made the exercise nearly archaeological. My allergist would have been horrified.

On red letter days, I rediscovered national treasures that had spent years buried under the dust: the Empire State Building blueprints, for example, or the original plans for Grand Central Terminal. But I spent most days sifting through an onslaught of the mundane—the national rebar collection, engine indicators, or twenty years'



*Marsh and an intern from Swarthmore College examine steam toys.*

worth of one engineer's daily planners. I began to better appreciate why no one had been eager to take on the task of sorting through all these shelves full of obsolete ideas. One typical spring morning, I slid open the glass doors of a storage case and pulled out sixteen patent models of boiler valves.

Trying to understand why, exactly, the museum had gone to the trouble of collecting so many boiler valves, I thumbed through Bulletin 173 of the United States National Museum, a catalog of the mechanical collections compiled back in 1939 to document the work done by the Division of Engineering's founding curators. It appeared they were trying to document the progress in standardizing safety laws. The nineteenth century was the Age of Steam, giving rise to the locomotives and factories of the Industrial Revolution. Steam boilers generated a tremendous amount of power, but they were also notoriously treacherous. Frequent explosions often killed workers, but no legal codes existed to regulate construction and operation of pressure vessels until 1915, over one hundred years after they came into widespread use. In the rows upon rows of boiler valves on the shelves in front

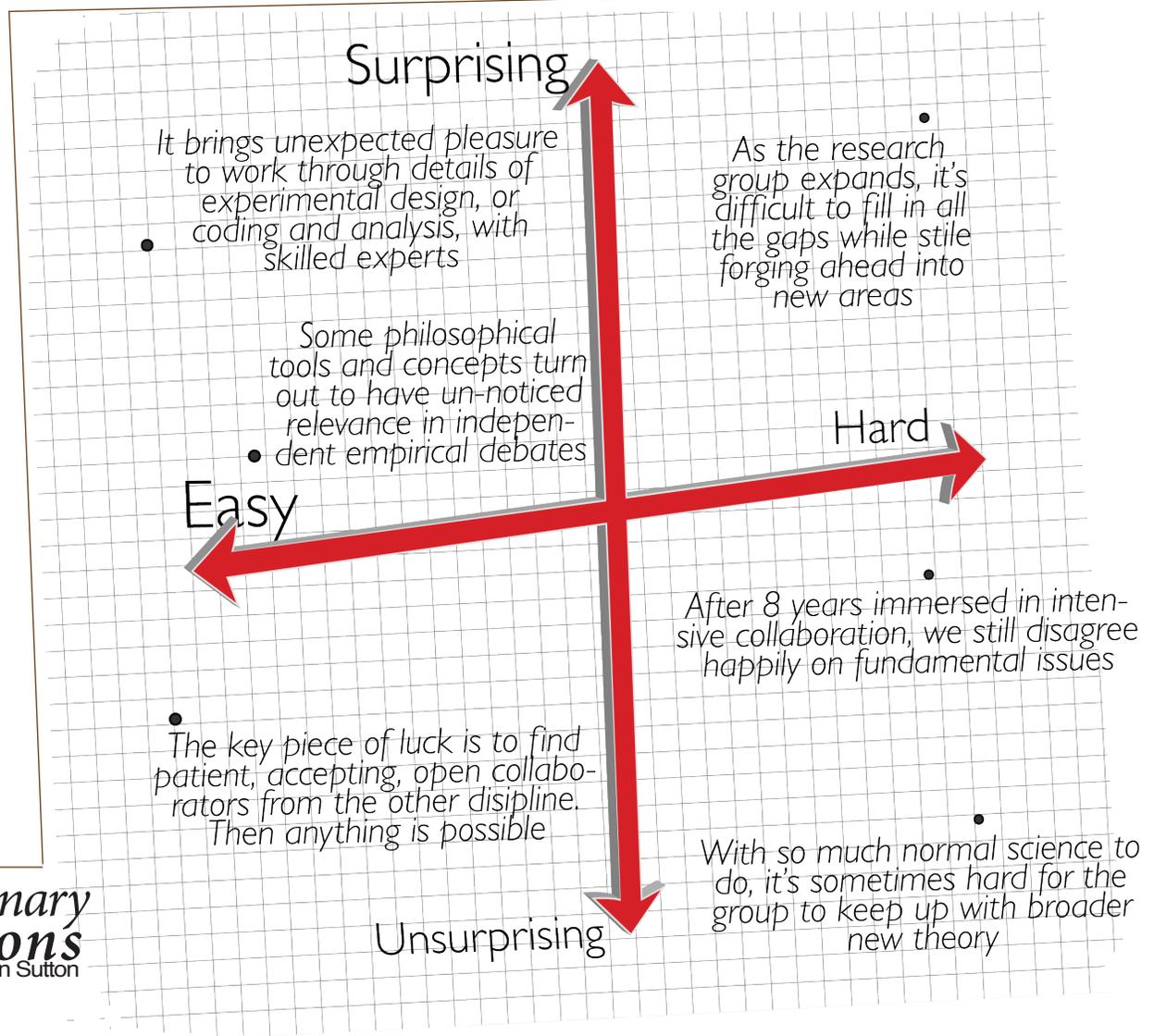
of me, I began to glimpse years of work by countless engineers desperately trying—with varying degrees of success—to devise a technological fix to a serious problem.

Curators are custodians of the past, but they must also collect the present in anticipation of the future. They grab hold of ideas, like the increasing importance of workplace safety at the tail end of the Industrial Revolution, and attempt to illustrate them with physical objects, like the boiler valves. Curators can't always predict which new technologies or interests will guide future research, but they can nevertheless preserve the potential of latent information and make it available to

its future interpreters. Long after such artifacts have been rendered obsolete in the world outside the museum, the curators at NMAH hold them in trust for the American public.

I lined up all of the boiler valves in a row on a table in the reference room. At one point, they had told a story—a story those founding curators had hoped to share with audiences reaching far into the future—and my job now was to make sure that story could be rescued and retold by the curators and visitors who I hoped would come after me. With minimal written information about the valves' importance and provenance, I sat down to do what I was trained to do: read the objects.

*Excerpt from:  
"Collective Forgetting:  
Inside the Smithsonian's  
Curatorial Crisis" by  
Allison Marsh with Lizzie  
Wade.  
Full article available [online](#).*



*New Directions in  
Philosophy of Science in Practice:*  
**Towards an Epistemology  
of Implementation**

Eivind Engebretsen

Slow and insufficient uptake of knowledge into everyday practice represents a barrier for optimal health care. During the last decades, significant efforts have been made to facilitate the implementation of research into practice. Implementation research is a growing and multidisciplinary field which is often defined as “the scientific study of methods to promote the uptake of research findings for the purpose of improving the quality of care” (Agency for Healthcare Research and Quality 2004). Researchers within this field have measured the uptake of knowledge in everyday practice, analyzed barriers and facilitators for change and developed a wide range of methods and approaches for closing the “know-do-gap”. However, less attention has been given to the concepts of implementation itself, how it is to be understood and the epistemological challenges involved in its application. There are several implicit presuppositions within implementation research that call for philosophical questioning:

The concept of implementation seems to be based on the idea of a “supply line” of knowledge in which the researcher is the active sender and the practitioner a passive receiver of knowledge. The idea of implementing knowledge tends to presuppose that knowledge is transferred from someone who has knowledge to

someone who hasn’t. There are reasons to question whether this terminology is descriptive of how successful translation of knowledge actually comes about. Firstly, a new innovation or research result is of course never implemented into an empty space but integrated into a messy field of already acquired knowledge and local wisdom. The success of the new intervention depends on the dialogue between this local knowledge and the new intervention. Secondly, the receiver is far from passive in this process. On the contrary, the success of the implementation process relies entirely on the receiver’s ability to assimilate the new knowledge and to integrate it with the knowledge he already possesses. There is thus a need for a more accurate conceptualization of the processes involved than what is captured by the concept of implementation.

Implementation research tends to presuppose that implementation is mainly about making research knowledge available for everyday use. Based on principals from evidence-based medicine, there are several methods for summarizing, disseminating and transferring research knowledge in order to make it more operational and applicable in practice. However, equal emphasis has not been made on how to develop systematic methods for how to summarize and use experience and prefer-

ences as part of the implementation process. Within the EBM framework experience and preferences are often emphasized as sources on the same level as research knowledge. However, existing frameworks give little guidance on how to make use of these types of knowledge. Hence, there is a need for more systematic approaches to how experience and preferences should be integrated with research evidence as part of the implementation process.

There have been some attempts to approach the epistemological challenges of implementation. Trisha Greenhalgh has for several years accused implementation research of being under-theorized and she has argued the need for a more conscious approach to how different types of knowledge are interpreted and incorporated in implementation processes. In her view, we need to “break out of the constraining notions of ‘dissemination’ and ‘translation’ (both of which imply a Cartesian view of knowledge) and focus more on the embodied nature of tacit knowledge and the interactive processes of knowledge creation” (S. Wieringa & T Greenhalgh: Ten years of Mindlines, *Imp. Sc.* 2015).

In the interdisciplinary research group that I am heading at the University of Oslo (**KNOWIT – knowledge, implementation and translation**) we attempt to explore the epistemology of implementation empirically by studying how different kinds of knowledge are played out and integrated in implementation processes (I. Lillehaugen et al: Protocol for a qualitative study of knowledge translation in a participatory research project, *BMJ Open* 2013). More recently we have also developed a theoretical model for knowledge translation based on a four step framework drawn from the Canadian philosopher Bernard Lonergan (E. Engebretsen et al: Unpacking the process of interpretation in evidence-based decision making, *J Eval Clin Pract* 2015). The aim of this model is to make explicit the interpretational operations involved when combining and applying different kinds of knowledge. Despite these attempts to meet the epistemological challenges of implementation, there is a lot of work left to be done in order to develop an epistemology of implementation and more philosophical contributions are very much needed.

## *Interview:* *Annamaria Carusi*

Sophia Efstathiou

*1. First of all, it would be great to learn a bit more about your background and approaches to philosophy of science in practice. How did you become interested in practice-based and practice-relevant questions in philosophy of science?*

My academic career has been rather non-linear and winding. I started out in comparative literature and critical theory, took a detour via analytical philosophy, and looped back to phenomenology. I now draw on all of these. I think it was in my teaching that my attention to methods and

practices first emerged, as I was teaching literary theory at a South African university where most of my students simply did not share the background and hidden expectations of how to read texts and do theory. There was so much that was implicit, and it seemed to me very unfair to expect of students to meet some set of invisible goalposts. So I began a process of trying to make explicit and articulate how to go about extracting something from a text, in terms that were not designed for the 'insider circle' of a cultural élite. And that got me interested in the topic of articulation of implicit methods and practices. When I moved to the UK in 2001, I initially did not plan to work in academia again, and I was very attracted by new media. As a way of getting into this, I started designing courses for teaching philosophy online, and that again tapped into my interest in 'how to' – nitty gritty aspects of working with technologies that had definite implications for content and meaning. I found myself drawn into academia again via a research post in technology assisted learning, where once again methods were central in issues of design. Information technological settings all bring to the fore formalisation, organisation and structure, but if you're going to do that well, you need to pay attention to the meeting ground with all the messy stuff that does not fit. In the University of Oxford e-Research Centre (OeRC), I worked with a group of social scientists on broadly social and ethical aspects of e-research. Working with anthropologically oriented requirements engineers there brought to the fore again how what people do, in their mundane reality of trying to achieve research aims and goals, does not fit well with the formalisations of computation. Neither

does it fit with very well with the formalisations of philosophy of science or theoretical accounts of the scientific method.

*2. Your work has drawn links between artistic and scientific practices and emphasised the importance of the aesthetic and of visualisations specifically for how scientists work. How did you come to focus on these aspects of scientific work? Is the focus on aesthetic or other dimensions besides the traditionally epistemological and methodological questions of philosophy of science a way in which you see philosophy of science in practice contributing to the study of science?*

Working very closely especially with computational biologists in OeRC, I focused on what seemed to me a major aspect of the way they tried to organise their work: the images and visualisations. That suited me very well because it brought together my interest in the aesthetic and science: by the 'aesthetic', I don't mean the beauty of these images and visualisations, but rather, the organisation and arrangement of formal and structural properties to render meaning. A lot of scientific practice overlaps with aesthetic methods in that sense, as both of these constantly remake form-meaning constellations. This is the aspect of scientific practice that I find most fascinating: not that it fits in or does not with a theory about 'the' scientific method, but how it becomes clear, when one attends to practice, that most of the action in scientific practices is focused on rearrangements of form and content in artefacts (diagrams, tables, images, visualisations) that are laboured over. So even though my career path has ranged over several different areas – literature,

technology, e-science and computational biology – in a way my main focus has remained quite steady: what is this underlying labour of scientific and cultural practices devoted to the constant upkeep and reformation of representational capacity?

*3. Another distinctive element of your work is a bridging of “continental” philosophy and phenomenology and Anglo-Saxon analytic philosophy. Is this approach another way in which you see philosophy of science in practice contributing to the study of science?*

As I mentioned, I started out in comparative literature, and especially critical theory. Here I focused on the three ‘posts’: post-structuralism, post-modernism and post-colonialism. I was really frustrated with what I saw as dead ends in these three trends in theory, so I took some time out, during a year of sabbatical, to go back to university and do a third year course in analytical philosophy. I found it, at the time, a very refreshing departure from what I had been doing, and so carried on to do an Honours degree in philosophy, part-time while continuing in my lecturing position. I went on to do a PhD, where I focused on themes of embodiment in Kant and Merleau-Ponty. I wanted to look at these theories of embodiment from an analytical perspective, but very soon realised that this would be precisely to lose out on what was most interesting about both of them. So in that way, I finally came out at a point where I draw, rather eclectically, from these three traditions. Phenomenology certainly does bring one closer to practices and actual doings, especially in the work of Merleau-Ponty, to whom I am especially devoted for his ability to bring out the ‘thickness’ of experience, for the

way that he privileges aesthetic paths to exploring experience, and for the way he posits the relation between science and art.

*4. You are an academic with some wide interdisciplinary experiences, in your training and work. Besides philosophy, you studied comparative literature, and you were for many years involved in the University of Oxford e-Research Centre for e-science. Your work has also employed ethnographic and empirical methods and involved close collaborations with scientists. What have been the challenges and rewards of working in such a more broadly interdisciplinary way? Do you think philosophy of science in practice needs to adopt interdisciplinary work practices?*



I have worked in many non-standard settings for philosophers, and my two most recent positions have both been in Medical Faculties. I have worked in so many different kinds of interdisciplinary settings, with other humanities disciplines (such as visual cultures, media studies and history), anthropology and social studies of science, that by now I would say that I have a rather fluid disciplinary identity, and often describe myself as a socio-humanist scholar.

Collaborations with scientists are different. I would say that some of my most rewarding collaborations have been with scientists of different kinds – biologists, mathematicians, engineers – because I really enjoy learning about the science, I find the small details of what they do really fascinating, and I am challenged in my own assumptions and understandings by what they do. I have been really committed to these cross-disciplinary relationships, but I sometimes find them difficult to do. In order to get the best from these collaborations, you need to bring something of interest to the scientists as well; but that can be challenging to do on an ongoing basis. There is only so far you can go with generic philosophy of science or responsible conduct of science, especially if you are involved with groups for a long time. You need to keep on bringing insights and approaches that are relevant to what they're doing as it evolves over time, and that can take a lot of energy. There are points where you're not doing philosophy or humanities any more – that is often a good point, where it is so hybrid that you have yourself crossed disciplinary boundaries. You experience for yourself the institutional contingency of parcelling up questions along disciplinary lines. But it can also be really bad for academic careers, as academic institutions are not structured to cope with hybrids.

*5. There has been some critique and concern regarding the value of integrated or embedded work between sociohumanists and scientists. A key concern is that the critical or communicative abilities of the sociohumanists can get co-opted or subsumed to the interests of the scientists, so that such collaborations either falsely legitimate scientific practices as more “ethical” or “responsible” or end up contributing to science “communication” or “popularisation”. How should philosophers of science in practice interested in pursuing collaborations position themselves here? How do you understand the goals of science-humanities collaborations and how do you pursue contact with practice and practitioners in your work and questions?*

There is a strong socio-ethico-political aspect to my engagement with science, and commitment to bringing humanities perspectives to it, as the range of informational and computational technologies that we are now seeing emerge, and the new biosciences, are so strongly shaping our social and cultural world. However, it is not at all straightforward how to go about doing this. Frequently, we are called upon to participate in technoscience projects, to ensure that the ethical, legal and social aspects are taken into consideration. These projects often place the socio-humanists involved in difficult positions, since the terms of the collaboration are set by technoscientific aims and purposes and the balance of power is so heavily stacked against us. I believe we have to put pressure on the institutional frameworks for these kinds of projects to ensure a more level playing field. But there are other actions to take too, more closely related to our own mundane activities and practices in interacting with science and technology: this, I am still working on, and hope to write something up soon.

6. *Finally, it is great to have your contribution here for an issue that will coincide with the 2015 SPSP conference in Aarhus. You have recently taken a chair in the Medical Humanities program of Sheffield University, but having worked in Denmark and Norway yourself recently do you think there are distinctive approaches or questions in philosophy of science in practice as pursued in the UK versus in Scandinavia? What would be your vision for your new post in Sheffield?*

On the level of my own personal experience, I would say that the Scandinavian countries I know – Norway, through a longterm collaboration and Denmark through my three years at the University of Copenhagen, at the Centre for Medical Science and Technology Studies – have a longer track record of integrating social science and humanities with science and technology. Both of these countries have formal requirements for undergraduates to study philosophy, so it is already evident on the level of educational policy. Of course, such mandatory courses come with problems of their own, but still, there is an

infrastructure for exposure to philosophy. Personally, it gave me the platform to develop a philosophy in medical science and technology portfolio. Research projects in Denmark, however, seem to remain within traditional disciplinary tracks for the most part. In Norway I was involved in two projects that were funded under a call specifically looking for projects that would go beyond the ELSI model of incorporating socio-humanists within science projects. I have not seen any similar large-scale call by the main research councils in the UK.

At the University of Sheffield, my remit is to develop Medical Humanities into a thriving hub where no-one is bound to a fixed disciplinary identity, and where people are free to explore different inter-, cross-, and transdisciplinary arrangements, around a broad range of issues relating to health and medicine. My aim is to try to establish different paths whereby these collaborations actually make a difference, through my own work and through facilitating others, and to ensure that medical humanities are perceived as a critical component rather than an ornamental extra to medical science and practice.