

STS Matter(s)



Program in Science,
Technology, & Society
University of Michigan



© Robyn d'Avignon - artisanal gold processing in southeastern Senegal.

Notes From the Field:

[Elizabeth Roberts on 'Bioethnography A Collaborative, Methodological Experiment in Mexico City'](#)

In 1993, a team of U.S.-based environmental health researchers partnered with public health officials in Mexico to form ELEMENT: Early Life Exposure in Mexico to Environmental Toxicants. The project aimed to study the effects of chemical exposures, particularly lead, on fetal and childhood growth and neurological development in Mexico City, called the most polluted city on earth by the United Nations. Since 2012, I have been observing ELEMENT researchers at the University of Michigan, as well as the interactions between project staff and participants Mexico City. I am currently engaged in a year-long ethnographic study of six ELEMENT participant families living in two distinct working-class neighborhoods. My observations focus on household and neighborhood environments, including household economies, gendered and economic practices of food preparation, class stratification, kin relations, built environments, and urban infrastructures. Following this fieldwork, I will collaborate with ELEMENT scientists to develop a bio-ethnographic approach that will link my data with ELEMENT data relating chemical exposure to epigenetic mechanisms that shape bodily states (such as problematic neurological development, premature sexual maturation, and obesity and diabetes). This methodological experiment asks: How can we understand data from ethnographic and biological methods as equally real, constructed, and contingent? What new insight might we gain into bodily conditions by combining these approaches?

A Message from the Director:

Welcome to the inaugural edition of *STS Matter(s)*! STS at UM has been flourishing; we hope this newsletter gives you a taste of the excitement.

Our **graduate certificate program** has enrolled over 70 students since it began, with applicant numbers increasing steadily every year. Our community includes historians, anthropologists, sociologists, medical students, information scientists, and many others. From Morocco to India, from Europe to the Americas, their research spans the globe and is funded by sources as diverse as the National Science Foundation, the Social Science Research Council, and the Graham Sustainability Institute. This year's graduates are moving on to postdoctoral or faculty positions at Dartmouth, Virginia Tech, and Brown. And here's some wonderful, late-breaking news: our first alumnus, **Clapperton Mavhunga**, was recently awarded tenure by MIT's STS program. His book began as a UM dissertation in History and STS: *Transient Workspaces: Technologies of Everyday Innovation in Zimbabwe* (MIT Press 2014).

Our **undergraduate minor** is also thriving. We draw students from across the university, including Economics, Cognitive Science, Sociology, Biochemistry, History, Business, Public Policy, and Engineering. The core course has grown thanks to **Perrin Selcer's** gifted teaching. This year, the class hosted a dynamic round table on climate

change – read about it, and two of our students, on page 4.

We've also launched some new initiatives. We now live-tweet the talks in our monthly colloquium, and each week, program members take turns tweeting STS-relevant items that catch their fancy. Get a sense of our intellectual diversity by following us [@MichiganSTS](#). In 2013-14 our graduate students organized a mini-conference for program members and the UM community at large. It was such a success that we did it again this year; details on page 3. Over the last 18 months we've been developing a vision for our future, with the hope of raising funds for further expansion.

None of this would be possible without our wonderful faculty, who volunteer their energy, insights, and labor. This year we're thrilled to welcome **Silvia Lindtner** to our **core faculty**. Newly appointed at the School of Information, Silvia works on hacker and maker culture in China. We've also welcomed several additions to our **faculty affiliates**.

There's more to report than we can fit in a single newsletter. If you're reading the electronic version of this, the links are live – follow them to learn more about our community!

Gabrielle Hecht, Director.



Graduate Studies

Emily Merchant



Emily has just defended a dissertation that explores the history of demography and population politics from 1920 to 1984, a period characterized by intense concern about global population growth and efforts to curb it. It draws upon computational, archival, and oral methods of analysis.

Emily investigates the science behind population control theories and enterprises, arguing that existing literatures “just assumed in advance that there was science showing that the population was growing very quickly and that this was a problem.” Emily begins her examination of new theories of population growth in the 1920s, a moment when the field of demography was consolidated. She examines the production of theories, population modeling, and the implementation of these models and theories, treating “demography as a science that developed in the period of decolonization to really manage this geopolitical transition.” She also scrutinizes the field’s antecedents, including eugenics and vital statistics.

The digital component of Emily’s project grew out of a previous research opportunity at ICPSR (Inter- university Consortium



for Political and Social Research), which encouraged her to acquire intensive training in quantitative methods of social research. Emily will be joining Dartmouth College next year as a postdoctoral fellow at the Neukom Institute, and will continue to work on her exciting online open-access digital humanities project, “A Digital Reading of Twentieth-Century Demography,” which incorporates techniques of topic modeling, network analysis, and information visualization.



Stephen Mouldrem @StephenMouldrem · Mar 20

John Carson always has the best questions. What does thinking about spirits as actants do for us in a Western context? #STSMatters2015



STeMS Speaker Series

The 2014-2015 series brought a wide range of speakers to Ann Arbor. Here are a few of them: **Toby Jones**, from the History department at Rutgers, kicked off the year with a powerful talk on America’s oil wars, arguing that US energy and military infrastructures in the Persian Gulf have been inextricably entwined for decades. **Fa-Ti Fan** from SUNY Binghamton discussed the theories and practices behind the study of animals as earthquake detectors in 1960s and 1970s China and examined Chinese seismology’s role in the Cultural Revolution project of developing a mass science. **Marcy Darnovsky** from the Center for Genetics and Society discussed how recent commercialization of the life sciences and escalating manipulations of the biological world raise new ethical and political concerns. She called for a new kind of biopolitics in response to these concerns. **Annemarie Mol**, Professor of Anthropology of the Body at the University of Amsterdam, delivered the STS Distinguished Lecture. Mol urged us to think of eating not as a natural, self-evident act, but as a complex form of engagement with the world. The animals eaten by humans pre-digest nutrients through their own eating; mangoes grown in Peru for a European market bring the dynamics of political economy inside our bodies. Instead of seeing bodies as autonomous entities moving through the world, this perspective reveals the world moving through bodies.

Stephen Mouldrem



In the year 1996, highly-active antiretroviral therapies for HIV/AIDS (or “HAART”) were introduced, making HIV a “chronic manageable illness” for most U.S. patients. Stephen focuses on gay male health after 1996, when gay men started to experience new regimens of self care administered and coordinated by the state. He intends to explore how these new health care policies and practices - supported by the federal government and administered by local grantees - affect the way health care is delivered to gay male populations. He also is interested in how database technologies and IT infrastructures affect these health care services and the funding devoted to them.

He situates his work at the intersection of queer studies, science and technology studies, and the history of sexuality. As a Doctoral Candidate in the Department of American Culture who is completing the STS Graduate Certificate, Stephen eagerly acknowledges the advantages that an STS perspective has brought to the scope of his work: “Moving into the STS space opened up a whole new set of interlocutors that has enriched my time here at the U of M.” STS has also given Stephen a “nuts and bolts” perspective on material relations and knowledge production in clinical spaces. While Stephen relies heavily on queer studies for vocabularies to describe changes in how gay men have increasingly been addressed on normative terms in political discourse over the last 20 years, he uses STS frameworks to explore how new treatment regimens and norms are administered on a day-to-day basis. His dissertation will incorporate an ethnographic component examining how public health workers manage and dispense healthcare knowledge and techniques.



The Matter(s) of STS



Professor of American Culture and OBGYN and STS graduate studies director Alex Stern delivering her PechaKucha

FemTechNet is a project motivated by open access knowledge; it facilitates the creation and circulation of free, publicly accessible teaching materials.

The 'Stuff' of STS

Perhaps the most compelling feature of the Matter(s) of STS involved less 'talk' and more 'stuff.' Material things found equal footing with more discursive affairs, allowing participants to engage concurrently and critically with both types of matters. From Hello-Kitty cell phones to toy cars, and from curtains of northwest Madagascar to cement blocks and digital recorders, materials were 'black boxed' for conference participants to observe, listen to, and touch. Participants made conjectures about the design and use of each item, and at the end of the event contributors revealed the identities and potential significance of the mysterious objects.



A mid 20th-century pneumothorax device, designed to deflate lungs in order to treat diseases like tuberculosis. Presented by Joel Howell.

Our second annual STS Mini-Conference took place on Friday, March 20, exemplifying the mixture of boldness, rigor, and fun that characterize our program, and bringing together over 80 graduate students and faculty from across campus. From 'Haraway Hagiography' to 'Logistics,' from West Africa to California, and from the College of Architecture to the Department of Anthropology, presenters drew on a wide range of methodologies, theoretical frameworks, and material things to get to the heart of recent scholarship in Science and Technology Studies, and to contemplate its future directions.

Lisa Nakamura helped us brainstorm ways to make STS matters both public and collaborative. She set the stage with her keynote talk on **FemTechNet**, an online network of scholars and students who work on the intersection of feminism, technology, and science in society.



Stephen Mollidre retweeted

Padma C. @heysoke · Mar 20

we have hashtags and we're going to be breaking down some disciplinary boundaries. #STSmatters2015



Fusillades! Refiring the STS Canon

This slew of short, provocative talks tackled one nail-biting question: what is missing from our beloved STS Canon?

Robert Goodspeed kicked us off with retaliation against technocracy by way of Dewey and pragmatism. **Kevin Donovan** argued that *logistics* as a sociotechnical phenomenon is in need of critical and empirical engagement from STS. Because activities like sourcing and distribution have moved into the center of postwar corporate life, STS ought to attend more to the logistics embedded

in various local settings. **Davide Orsini** argued that a turn to material semiotics could produce a new kind of risk assessment, one that productively puts non-expert and expert knowledge on the same analytic plane. **Adam Johnson** dissected the annotations on a copy of Haraway's *Simians, Cyborgs and Women* that he'd procured from a used book seller in order to situate our current engagements with her writings and argue for her uncanny, continued relevance.

STS PechaKucha

Following the keynote, a handful of faculty and students delivered meticulously timed talks on current works as they tried to keep pace with images rolling in the background. 20 slides allotted 20 seconds each, 'STS PechaKucha' required speakers to be intentional, assertive, and - above all - quick!

Robyn d'Avignon shared images from her fieldwork in Bambuk, Senegal and advocated attending not just to the agency of materials, but also to that of spirits when analyzing technological practice and the moral economy of extraction in West Africa. **Brian Matzke** and **Paula Teichholtz** tag-teamed a talk that debated the meaning of geometric engravings on shells made by *Homo erectus*. They asked: are these 'zig-zag' inscriptions doodles or art? The shell controversy demanded that we think about how humans and the primitive are constructed, and the role of the non-human actor in the making of human society. Switching gears, **Joy Rohde** brought us into the world of Cold War computerized command and control, in which social scientists, computer analysts, and information technology converged in the making an automated computerized system designed to monitor international relations, produce political and military indicators, and predict political crises. According to the system's creators, international politics boiled down to one simple expression: [Conflict – Cooperation] / [All Events]. **Alexandra Stern** presented a project that has coded some 15,000 sterilization recommendations processed by the state of California after 1909. Stern's team explored demographic patterns within the data to reveal several trends, such as racial bias against Mexican-origin families, and punitive control used for those who displayed abnormal sexual behaviors. Stern emphasized the importance of cross-disciplinary collaboration in this approach, as well as the implementation of STS concepts, especially in understanding the role of inscription and the deployment of document-as-process.



STS mini-conference co-organizer Daniel Williford

Jody Chou



Jody is a junior majoring in Neuroscience and minoring in STS; she is deeply committed to a career in healthcare and hopes to attend medical school after graduation. Jody says that STS is important to her because “in this increasingly connected and interdisciplinary world, it’s kind of insufficient to just look at medicine through one perspective. And bringing tools and techniques that we learn from different disciplines is very helpful. Especially if you’re wanting to make a difference in society, you need to understand the context that you’re trying to change.” She is also curious about how accelerating technical developments in the hospital may affect physician-patient relationships. The core course in STS taught Jody that her interests were not limited to understanding information and health technologies alone, but also extended to different types of technoscientific processes and initiatives, such as nuclear weapon developments. For Jody, STS is everywhere and in everything: “We’re influenced by it everyday. It’s relevant to everybody because we’re all part of this culture.”

STS Minor

The STS minor is open to all University of Michigan undergraduates, regardless of prerequisites or major. Please email sts.minor.advisor@umich.edu or umsts@umich.edu for more information.

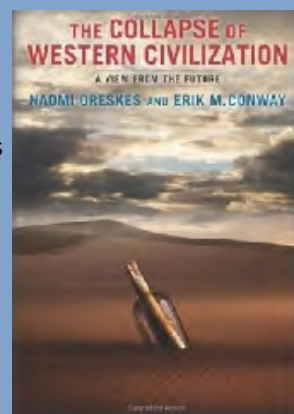


STS undergraduate studies director Anna Kirkland was named an Arthur Thurnau professor this year in honor of her teaching excellence.

Roundtable: Beyond the Passive Voice

The STS minor core course (History 285) hosted a special event called “Beyond the Passive Voice: A Roundtable Discussion of Oreskes and Conway, *The Collapse of Western Civilization*” on March 30. The event was free and open to the public. The goal was to raise awareness about the importance of engaging with climate change issues from an STS perspective. The book under discussion, *The Collapse of Western Civilization*, is part of a new ‘cli-fi’ subgenre of fiction focused on mapping the political, social, and natural terrains of a future world devastated by global warming. The event kicked off with a virtual conference call from Naomi Oreskes, who answered students’ questions. Oreskes explained that climate change is “a thermodynamic problem that involves the transfer of gas into the atmosphere. But we have an economic system that doesn’t price that. So lots of people have recognized climate change [...as] the greatest market failure ever.” She warned that “if we don’t do something now to remedy the market failure, the remedies that we’re going to be looking at in the future are going to be much more draconian.”

UM discussants then offered their critiques. Noting that Oreskes and Conway were not the first scholars to use the medium of science fiction to argue that environmental degradation may destroy civilization, **Emily Merchant** proposed that empirical, rigorous case studies may have stronger political impact than sci-fi apocalyptic projections. **Alex Stern** provocatively asked whether such experimental scholarship actually works at the level of policy change, and questioned the authors’ placement of culpability on scientific reductionism. **Paul Edwards** (School of Information & Department of History) agreed, suggesting that the problem might be rooted less in scientific reductionism, and more in the special language of science. Words like “uncertainty” and “bias” in scientific communities carry different meanings for laypeople, causing confusion in public discussions. **Susan Parish** (Department of English) assessed how Oreskes and Conway drew on narrative traditions. Their book powerfully leverages the literary technique of defamiliarization by making our present someone else’s failed past. But the narrator’s post-crisis oration, after a “Benjamin Franklin-heroic-inventor-figure” saves the world single-handedly, may not be a realistic or useful way to imagine solutions for a large-scale calamity.



Erin Dunne



Erin is currently a sophomore, well on her way to a triple major in History, International Studies, and Cognitive Science with a minor in STS, and leaning towards a career in law. After enrolling in a course on ‘Deep Time,’ which explored the history of science

and the nature of scientific inquiry, Erin found herself intrigued by STS. In high school, Erin served on the board of a non-profit organization working on environmental issues. “A lot of what attracted me to STS was its interdisciplinary nature,” says Erin, but she’s also “fascinated by... current political issues especially around climate change.” Erin likes the STS core course “because it’s not just focusing on one issue,” and adds that there is “a lot of room for that discussion of ‘what is this issue, why are we looking at this, and what are other narratives that can be told about it?’” Erin astutely points out that science doesn’t just make itself, which is why we need to consider the political, social, and cultural forces behind its making. Erin encourages other undergraduates to apply for the STS minor, noting that interviewers often ask her about her STS knowledge even in non-science fields, and that being able to discuss “international issues in the nuanced ways that STS provides... was incredible.”

