

CATALYST

feminism, theory, technoscience

Introduction to the Inaugural Issue of *Catalyst*

Editorial Board
Catalyst Journal
editor@catalystjournal.org

Welcome to the inaugural issue of *Catalyst*, an international, peer-reviewed, open-source online journal published twice yearly. *Catalyst* aims to gather together and extend the profoundly interdisciplinary and growing field of feminist science and technology studies (STS), for which there is no extant journal in circulation. The three words in the journal's subtitle—*feminism*, *theory*, and *technoscience*—matter to the vision of the intellectual and political mixings that this journal is designed to stimulate.

In chemistry, a catalyst is an agent that sparks a reaction and increases its rate, stimulating shifts and changing outcomes. A catalyst galvanizes but also produces alternative pathways for actions to occur. In this spirit, the editors of *Catalyst* aim to do more than provide a home for creative and critical feminist science studies scholarship. We want to provide a catalyst for research that is reflexively constituted through its upstream histories and downstream futures. Thus feminist science studies is not the exclusive focus of *Catalyst*; the journal also seeks to support and foster feminist science studies through expanded forms including mixtures with other critical traditions, research-based critical media practice, new orientations, and experiments that will continue to elaborate the future of the field.

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Catalyst is here to facilitate distributed chains of scholarly reactions, yielding new work that both synthesizes a range of feminist and critical intellectual legacies and transforms them in the process. While the journal foregrounds feminist science and technology studies, it also recognizes the plurality of traditions that have come into reaction with feminism and technoscience—reactions for which there is now a dedicated forum.

Manifesta for a Journal of Feminism, Theory, and Technoscience

Catalyst is conceived of as an experiment. Experiments are a shared practice across the arts and the sciences and at the heart of STS. In a broad sense, experiments can be thought of as technical-social assemblies that arrange and intervene in the world towards the possibility of making something different happen. Experiments, thus, are conjectural future-making assemblages. As an experiment, the launch of this journal invites the question: What might a future feminist STS become?

This question is not merely academic. In a world infused with technoscience, the work of theorizing and inventing better relations and practices with technoscience remains urgent: from the ways in which scientific practices are built out of social hierarchies, to the ways in which new and old forms of militarisms propagate; from the ways that race relations build structural violence into the everyday, to the ways that new forms of life are being assembled in labs.

Feminist STS is a dispersed project, with work happening in formalized disciplinary sites of gender and sexuality studies, disability studies, ethnic studies, black studies, arts departments, architecture, and geography. But it also propagates through the biomedical sciences in labs and clinics and workshops, shaping experimental stakes, relationships, and pedagogies. The genealogies feeding into feminist STS include critiques of capital and its ecological manifestations, drawing from the works of Rachel Carson, Silvia Federici, Shulamith Firestone, C.L.R. James, Catherine Waldby, Melinda Cooper, Aihwa Ong, Stefen Helmreich, Cori Hayden, and Anna Tsing. Scholars including Adele Clarke, Donna

Haraway, Sandra Harding, Evelyn Hammonds, N. Katherine Hayles, Elizabeth Grosz, Susan Leigh Star, Lucy Suchman, Sarah Franklin, Karen Barad, Isabelle Stengers, Rosi Braidotti, Hannah Landecker, Paula A. Treichler, Evelyn Fox Keller, and Anne Fausto-Sterling established conceptual and methodological tools that fleshed out the structures and workings of power in scientific discourse and practice, helping to break down persistent binaries between bodies and technologies, language and matter, and nature and culture. Scholars such as Dorothy Roberts, Audre Lorde, Sylvia Wynter, Paul Gilroy, Stuart Hall, Octavia Butler, Alondra Nelson, Jenny Reardon, Katherine McKittrick, Anne Pollock, and Catherine Bliss have theorized racial formations and racisms as they compose the relations and potentials of technoscience. Scholarship by Frantz Fanon, Gayatri Spivak, Helen Verran, Kim Tallbear, Kavita Philip, Diane Nelson, Geeta Patel, Wendy Hui Kyong Chun, Lisa Nakamura, Laura Briggs, Lawrence Cohen, Kim Fortun, Gabrielle Hecht, and Nancy Hunt has grappled with and against colonial and postcolonial conjunctures, as well as global itineraries and constellations. Writing on embodied spectatorship and apparatuses of viewing as well as image making, scholars such as Kara Keeling, Vivian Sobchack, Manthia Diawara, Hoday King, Constance Penley, Mary Ann Doane, Teresa de Lauretis, Anne Friedberg, Laura Marks, and Lisa Parks spurred greater focus on technologies and phenomenologies of representation in media studies and visual culture. In disability studies, Rosemarie Garland-Thomson, Alison Kafer, Robert McRuer, Lennard J. Davis, and Mel Chen among others interrogate reductive assumptions of normalcy and able-bodiedness, illustrating how medical models, built environments, and institutional mandates around care and public health (re)produce compulsory modes of living. And queer turns into technoscience have retheorized ontology, embodiment, power, and agencies through the interventions of scholars such as Jasbir Puar, Elizabeth A. Wilson, Jennifer Terry, and Eva Hayward, along with many others.

Catalyst offers opportunities for scholars and activists to recompose the histories that animate theory and technoscience across this spectrum

that constitutes the expanded field. The journal does not aspire to crystalize a feminist STS as a singular field with fixed intellectual or disciplinary boundaries. Instead, it aims to set in motion and mobilize the resources to foster needed encounters among critical traditions. As we write this, the various genealogies, some cited above, that have given shape to contemporary feminist STS over the past four decades are being remade as scholars discover neglected or ignored sources of inspiration, such as the turn-of-the century science fiction of Muslim Bengali feminist Begum Rokeya, or insert new kinds of embodiments into canonical texts, such as new readings of the work of Sigmund Freud, or invoke the works of feminist scientists such as Lynn Margulis and Barbara McClintock, or reposition the crucial work of postcolonial thinkers such as Frantz Fanon and Saidiya Hartman as constitutive of the field's intellectual and political directions. The launching of this journal both recognizes these diverse legacies and sites of work and offers a manifesta for the continued catalyzing of theory, practice, and feminist technoscience studies into the future.

As a peer-reviewed journal dedicated to modeling as well as pushing the boundaries of theoretically and politically engaged scholarship, *Catalyst* seeks to provide a point of convergence for what feminist STS might become as well as a platform from which to launch future iterations. Forthcoming issues, for example, will explore themes including Black Studies and Feminist Technoscience, Digital Militarism, and Disability and Technoscience. And while critique is a crucial stimulant for routing technoscience into new pathways, feminist STS is also strongly formed through an affirmative tradition of imagining and conjuring better, less violent, more livable technoscientific worlds. As a site of experiment, *Catalyst* is committed to bringing theory and practice together. This is because feminist STS has erupted in multiple artistic settings and activist collectivities, in digital practices, and in transnational circuits of making and doing that involves activists as well as practicing scientists who are grappling with shared theoretical issues. *Catalyst* thus invites both conceptual and practical innovations—from creating speculative science

fiction, to re-theorizing ontology, to fabricating new natures through bio-art, to transforming the curatorial ethos within digital projects, to decolonizing experimental practice, to situating multiple objectivities.

Furthermore, *Catalyst* aims to thicken theoretical contributions to feminist STS as well as to feminist activism and politics in sciences and technology. *Catalyst's* online platform differs from the traditional print journal format in that it provides space for exhibiting visual works not easily printed and prompts collaboration and criticism with the aim of developing research. It will both support the work of feminist scientists and offer a place where the scientific method can be read closely and critically in an effort to move closer towards shared objects of knowledge. In this sense, the journal hopes do more than translate across disciplines; it aims to be a platform that can generate dialogue between science practitioners and theoreticians by bringing feminist, anti-racist, and queer theory into biomedicine, or reimagining ecological frames, or designing social justice into existing and future infrastructures. What practices, we ask, might a future feminist STS contain? What encounters might compose and decompose it? And what tensions might be held together by it? These are some of the questions that drive forward this catalyst for disciplinary change in STS.

Experiments in Practice

Catalyst has been designed to embody the editorial board's collective commitment to the politics of practice. A geographically and disciplinarily diverse [editorial board](#) has collectively organized and shared the labor of soliciting, editing, and publishing, relying on the expertise and guidance of an extended international [advisory board](#) of ~100 feminist STS scholars. This expanded network makes the vision behind *Catalyst* possible. The editorial board currently operates on an independent platform outside of the structures of a university server or press, which also allows it to avoid for-profit publishing houses as well. The collective has tried to reassemble

the modes of production associated with the traditional print journal.

The journal expands this commitment to a politics of practice by adhering to labor practices that bring close attention to the politics and mechanisms of staffing. The editorial board has funded graduate student research positions and grants tied to university departments to bring the platform to life. Built on an independent server space using the open-source software [Open Journal Systems](#) developed by the [Public Knowledge Project](#), *Catalyst* is locally installed and controlled by the research assistants and editorial board. With this move, software development, web design, and site management are conceptualized as research projects themselves, not merely the facilitation of others' intellectual exchanges. By valuing the ongoing labor of producing a journal as on par with other aspects of technoscientific research production, *Catalyst* endeavors to continually and reflexively attend to issues raised in this first issue about digital technology and material labor. This commitment to a politics of practice is equally reflected in the board's attentiveness to modes of access, as laid out in *Catalyst's* [Mission Statement](#).

The original development of *Catalyst* began in 2012, sparked by Elizabeth A. Wilson and Deboleena Roy at Emory University and Lisa Cartwright and David Serlin at the University of California, San Diego. An initial meeting of the editorial steering committee was held at Emory in March 2013. The early vision was for a journal of theory in STS with feminism and sister theories and practices front and center. Other crucial nodes in the journal's intellectual and political development, as reflected in the geographic distribution and support of the current editorial board include, in the US, Kimberly Juanita Brown at Mount Holyoke, Martha Lampland at UC San Diego, Mara Mills at New York University, Rachel Lee at UCLA, and Banu Subramaniam at the University of Massachusetts, Amherst, and, in Canada, Michelle Murphy at the University of Toronto, and Natasha Myers at York University. As an ongoing experiment, we aspire for the journal's production to become more transnational over time, and thus better reflect the multi-sited creation of scholarship. This

commitment to distributed production has further shaped the journal's international advisory board, the members of which provide expertise for vetting contributions, and who are invited to propose and craft thematic issues or journal sections.

The journal has a dedicated managing editor position that is generously supported by the Department of Communication and the graduate Science Studies Program at UC San Diego, as well as an administrative office in the [Catalyst Lab](#) located in UCSD's Department of Visual Arts. This first issue of *Catalyst* has been brought to life through the on-the-ground labor of UCSD graduate students Monika Sengul-Jones and M. Cristina Visperas, the journal's managing editors for 2014-16. Visperas and Sengul-Jones, working closely with editorial board member Lisa Cartwright, have made the original vision for *Catalyst* a reality in this first issue. Visperas managed submissions and the juried review process with Cartwright, guiding the editorial board through every phase of crafting the website's textual groundwork and the first issue's production. Sengul-Jones independently authored the journal's platform and saw the online journal's first issue to completion. Mara Mills and Louise Hickman worked with Sengul-Jones on web design and the first issue's format with respect to accessibility throughout the process of designing, developing, and launching the journal. The contributions along the way of Nicholas Hirsch, Cat Crowder, Alec Smecher at the Public Knowledge Project, and the generous Open Journal Systems users who responded to Catalyst-related forum posts seeking advice also have been significant and timely. Banu Subramaniam (University of Massachusetts, Amherst) and Deboleena Roy (Emory) led the "News in Focus" and "Lab Meeting" sections in which we bring into view ongoing work by science researchers and practitioners in the field. Joanna Zylinska and Jackie Orr have contributed innovative image-text pieces that demonstrate the journal's commitment to forging new styles and forms of peer-reviewed research practice.

As the journal grows over time, we envision that editorial work will be distributed across a more dispersed set of local and transnational nodes that complement the administrative and digital infrastructures that

have been built at UC San Diego, and which have been supported by Emory, NYU, and other institutions. In keeping with the journal's mission to address power and inequality in emerging technologies across the globe, including issues of gender, race, class, sexuality, nation, and ability, the website will reflexively take on the problem of access to the digital as an intellectual concern as well as a structural feature of the journal itself, publishing and archiving highly visual, multimedia works with a disability practice ethic.

Issue No. 1

Catalyst's inaugural issue captures our vision of encounters between theory, feminism and technoscience.

Lindsey Andrews's contribution offers a genealogy of black feminist empiricism that routes the counter-practices of empiricism through Zora Neale Hurston and The Combahee River Collective. In doing so, Andrews shows how opacity and subjectivity ground an itinerary of black feminist empiricism that critiques and counters legal and medico-scientific circumscription of Black women's lives, thus troubling to the demands of positivist regimes.

Neda Atanasoski's and Kalindi Vora's essay, "Surrogate Humanity: Posthuman Networks and the (Racialized) Obsolescence of Labor," theorizes the global-racial erasures and disappearances undergirding techno-utopic fantasies of a post-labor society. Theorizing with Sylvia Wynter, Jeremy Rifkin, and Frantz Fanon, the essay shows how digital labor infrastructures of humans and things (such as Amazon's Mechanical Turk) are both racial and racializing. At stake are what can count as human and how the subject of labor is theorized. Their article is paired with an interview by Monika Sengul-Jones with Lilly Irani, a scholar and practitioner in digital labor intervention around systems including Amazon's Mechanical Turk.

Jih-Fei Cheng's "'El tabaco se ha mulato': Globalizing Race, Viruses, and Scientific Observation in the Late-Nineteenth-Century" begins

with the observation that the earliest recorded descriptor for viral infection, which was discovered in the tobacco plant, used the racialized Spanish expression “el tabaco se ha mulato” (“the tobacco became mulatto”). Cheng’s essay takes up this fact to historicize virus discovery at the juncture between science, nation-building, global industrialization, and the disciplining of race and sex under the long shadow of Euro-American empire, thereby offering a route towards the queer decolonizing of racial regimes and biological conceptions of life.

It takes guts to do feminist theory, but few of us have thought deeply about the relationship of the gut to our emotions, intellect, and psychology. Elizabeth Wilson, one of our founding editorial board members, gives us a taste of the arguments in her recent book, *Gut Feminism*, in which she argues for a rethinking of feminist theory by taking seriously for and through feminist theory the gut-brain connection and the psychology and biology of guts and digestion as they impact our subjectivity and psychic conditions of being. In tension with Wilson’s essay, Anne Pollock theorizes with another organ laden with meaning for feminism: the heartpart of the body. In her “Heart Feminism,” Pollock offers speculations and provocations towards taking up the heart as way to repose questions of life and embodiment, especially ones inspired by neuroscience, for feminist theory.

In addition to monographic feature articles, *Catalyst* includes innovative and experimental new sections on topics that are both academically and temporally current in order to amplify the journal’s engagement with ongoing politics. “News in Brief,” for example, invites scholars and activists to share short critical commentaries on pressing recent events. This inaugural issue’s “News in Brief” section, curated by editorial board members Deboleena Roy and Banu Subramaniam, is focused on Ebola, and features critical commentary from microbiologist Elke Mühlberger, feminist and African studies scholar Pamela Scully, and cultural and queer studies scholar Jennifer Terry.

Another regular section, “Lab Meeting,” also curated by Banu Subramaniam and Deboleena Roy, is devoted to supporting dialogue

across science practice and feminist and critical theory. This inaugural issue's "Lab Meeting" brings together three practicing scientists —Anelis Kaiser, co-founder of the NeuroGenderings international network; Daphna Joel, a psychologist who researches neural mechanisms; and Stacey Ritz, who leads the Biology Working Group of the CIHR Team in Gender, Environment, and Health—in conversation with historian of science, Sarah Richardson. Together they discuss the implications for experimental practices of the U.S. National Institutes of Health's proposed 2014 policy to promote "sex parity" in research.

This inaugural issue also offers two examples of the kinds of exchanges for which *Catalyst* hopes to provide a regular platform. The first is a dialogue between S. Lochlann Jain and Jackie Stacey, sparked after each of them read the other's book on cancer: Jain's *Malignant: How Cancer Becomes Us* (2014) and Stacey's *Teratologies: A Cultural Study of Cancer* (1997). Together they unpack and make visible the layered "grammar of cancer" and reflect on how they came to their methodological interventions shaped by their own cancer experiences. The second exchange, co-authored by Jenny Reardon, Jacob Metcalf, Martha Kenney, and Karen Barad, grapples with the pedagogical and social "trouble and promise" of the Science & Justice Graduate Training Program located at University of California, Santa Cruz. The Science & Justice Program offers an example of reassembling institutional spaces and re-forming the practices that make up feminist STS drawing on the creation of the Training Program which takes as its inspiration the recent feminist science studies re-workings of responsibility as *response-ability*.

Finally, because of the possibilities inherent in its born-digital format, *Catalyst* is able to explore media not typically associated with academic journals (either physical or virtual) as part of its commitment to experimental practice. In this inaugural issue, we present video essays by Jackie Orr and Joanna Zylińska.

Orr's contribution rethinks oil politics through a video and written style that becomes a kind of fictocritical contribution to research. In her piece, Orr invites us to contemplate the "subreal agencies" that are woven

into the catastrophe of petro-capitalist technoscience and yet might also offer counter-enchancements for feminist technoscience studies. Orr develops a performative mode of “magical subrealism” in which oil is an un-human that transmutes technoscience, time, and catastrophe into forms that are both material and fantastic.

Zylinska’s work meditates on the changing ecology of our everyday technical infrastructures and workaday entanglements that support domestic devices. Interweaving shots from underneath the artist’s desk taken over a period of one month, Zylinska offers a haunting installation of lines, grids, and traces that stimulate questions about past and future. Both of these contributions were put through the peer review process as research, an approach considered by the editorial board as a contribution to the growing movement to advance movement what counts as research in a digital world.

We are thrilled to be able to share this first issue of *Catalyst* and look forward to future exchanges and collaborative futures. The journal is intended as a meeting place, a site in which the unevenly raced, gendered, queered, colonial, militarized, embodied, ecological, and political economic beings and doings of technoscience studies and practice meet and, by doing so, are ongoingly transformed. We hope you will join us in making these transformations into material realities.