INTERDISCIPLINARY MIXED MEDIA INTER-CAMPUS UNDERGRADUATE SYMPOSIUM

(Un)certain boundaries
Visualizing the Intersections of ‘Science’ & Society

APRIL 26, 2013
UC BERKELEY • 470 STEPHENS HALL • 11:00 AM - 6:00 PM
about the event

Orchestrated by the Center for Science, Technology, Medicine, and Society’s Undergraduate Group, a co-product of Cori Hayden’s Science and Society Townsend Center Course Thread, the Spring 2013 Symposium invites undergraduates to bring together the social, the political, and the ‘scientific’ (medical, technological, and beyond), proposing that these disciplinary boundaries are not so easy to identify and distinguish in the first place.

The group wanted to push undergraduate work to incorporate interdisciplinarity, mixed media, and intersectionality into an original and rigorous engagement with science and society. A desire for inclusivity drove the event to welcome submissions from UC Berkeley as well as UC Davis and UC Santa Cruz, across all disciplines and mediums.

Inspired by the work of John Naccarato and caraballoo-farman, we took to examining the material possibilities of socioscientific analysis. How often, in the academic context, is it possible to actually feel and touch the things that matter, to “implode” the objects we live with everyday, or hear what intersections sound like? A call for submissions reached the three campuses, welcoming undergraduate work in the categories of informal mini-presentations on the histories and politics of an ‘object’, formal paper addresses, and mixed media exhibitions. Considering that this event is a thought experiment in it of itself, the group was thrilled and somewhat surprised at the high volume of excellent submissions. Featured today is the work that was found to most reflect a critical and interdisciplinary analysis of “science and society,” often troubling these very categories.

This symposium strives to open up lively debate around new forms of knowledge, boundary-drawing practices, and aesthetics in part by experimenting with the form that undergraduate research and presentations can take.

Our task in this symposium is to think critically about the world, the facts, and the things that surround us. In considering their histories, entanglements, and implications — and trying out new ways to engage them — we can imagine new futures and possibilities as well.

about CSTMS

The Center for Science, Technology, Medicine, & Society (CSTMS) at UC Berkeley promotes rigorous interdisciplinary research based on the conviction that the pressing problems of our time are simultaneously scientific and social, technological and political, ethical and economic.

As a laboratory for the 21st century university, the Center for Science, Technology, Medicine and Society (CSTMS) conducts cross-disciplinary research, teaching, and outreach on the histories and implications of scientific research, biomedicine, and new technologies.

The Center’s core mission is to:
• catalyze cross-disciplinary research on knowledge production and technological change in the past, present, and future;
• train new generations of undergraduates and graduate students in multiple literacies; and,
• generate broader impact with rapid response forums and major public events on the pressing issues of our time.

about Townsend Center Course Threads

The Course Threads Program allows Berkeley undergraduates to explore intellectual themes that connect courses across departments and disciplines. Without creating new majors or minors, the program instead highlights connections between existing courses. Course Threads help students see the value in educational breadth while also pursuing a more in-depth and well-rounded knowledge on one particular topic.

Beyond the confines of traditional disciplines, the Sciences and Society Course Thread helps Berkeley undergraduates investigate the complex relationships between perspectives and practices too often kept apart. Science and technology studies-related courses help us understand how science, technology, and medicine change our horizons of political possibility (as with social media and revolution) and social (in)justice (as with the promise and perils of egg donation and transnational surrogacy). They also help us understand how social and ethical commitments, historical processes, and political formations help shape what will count as authoritative knowledge and viable technologies.
schedule of events

April 26, 2013, 11:00 a.m. – 6:00 p.m.

11:00 am Opening remarks – Prof. Cori Hayden, Director - CSTMS
11:10 Reflections on the theme – Ian Brown, Alli Yates - CSTMS Undergraduates
11:20–12:05 pm Opening keynote lecture: “AR: Towards the Augmentation of a Brave New World,” John Naccarato

12:05–12:35 Lunch

Implosions (Informal Presentations)
12:35 –1:20 “Exploring the World in a Microscope through Literature and Bioengineering,” Jessie Lau, English/Theater and Performance Studies; Adrian Tabula, Bioengineering, UC Berkeley

“The All-terrain Vehicle and the Geographies of Coalfield Masculinity,” Gabriel Schwartzman, Geography, UC Berkeley

“Is the eating of eggs sexually stimulating?: Sex Education at UC Berkeley and its implications,” Katie Fleeman, History, UC Berkeley

“Social Terms in Biomedical Applications: Bidil and its Implications,” Matthew Kurkjian, Philosophy/Sociology, UC Santa Cruz


Mixed Media Presentation

Formal Presentations

2:10–2:25 “A Tuber With Many Names: Story-telling from Waorani Territory,” Nadia Lucia Peralta, Independent Studies, UC Santa Cruz

2:25–2:40 “Stories from the Heart: Biosocial Narratives of Adults with Complex Congenital Heart Disease,” Kaitlin Kimmel, Interdisciplinary Studies, UC Berkeley

2:40–2:55 “Death, choice, and moralities in American hospitals,” Michael Sadighian, Medical Anthropology, UC Berkeley


Mixed Media Presentation
3:30–3:42 “Searching for the “unenhanced body”: a performative (de)composition,” Sara Linck-Frenz, Comparative Literature, UC Berkeley

3:45–4:00 Break

Formal Presentations
4:00–4:15 “Engineering Posthumanity: Social, Economic, and Biological Implications of the Transhumanist Movement,” Benjamin Schaub, European Studies; Ryan Williams, Biology, UC Berkeley

4:15–4:30 “A New Eternal Flame: The Preservation of Identity Through Social Media,” James Pierce, English, UC Davis

4:30–4:45 “Access Impediments to drinking water in California,” Lindsay Dreizler, Conservation and Resources Studies, UC Berkeley

4:45–5:00 “In Small Things Forgotten: The Value of Archaeological Micro-debris in Unraveling Dhiban’s Imperial Past,” Nicholas Ames, Anthropology-Archaeology, UC Berkeley

5:00–5:15 “Towards a Political Ecology of Breast Cancer Epigenetics,” Alfonso Aranda, Geography, UC Davis

5:15–6:00 Closing keynote lecture: “The Patient Is The Medium, A performative lecture by caraballo-farman on cancer, technology and art,” caraballo-farman
**keynote presentations**

**caraballo-farman** is a two person team composed of Abou Farman and Leonor Caraballo, working in new media, video, installation and photography since 2001. caraballo-farman will present work from their recent project, Object Breast Cancer. After Caraballo was diagnosed with breast cancer, one of her first questions was: what does the tumor look like? The need to face the enemy led her and her husband, Abou, to embark on a pioneering project to visualize breast cancer tumors from the MRIs of patients and friends. Combining medical imaging, 3D printing and art, they turned this grim diagnosis into an inspiring project.

**John Naccarato** is an inter-disciplinary artist currently based out of Montreal, Canada. His work involves the creation and development of systems and objects, which engage in critical discourse about the intersection of art, media, and technology. Naccarato will present his current work on augmented reality with “AR: Towards the Augmentation of a Brave New World.” He will discuss how media technology has come to control the space we occupy, and how it has consequently begun to redefine notions of memory, ritual and identity.

**undergraduate presentations**

“The World through a Microscope: When Literature and Bioengineering Intersect”

Our implosion will investigate the symbolic, historical, and technological dimensions of a microscope through the lens of early 17th century literature and modern bioengineering research. Using the intersecting fields of English Literature and Bioengineering to view the microscope and its effects on perception, we will strive to explore the complex and transformative relationship between science and theology. The microscope has both widened our perception of the world and enabled us to drastically increase mankind’s scientific and technological capabilities since its creation. This implosion will focus on revealing the social ramifications of this increase in perception through analyzing its impacts on public ideology and opinion both at the time of its creation and at present. By revealing the ways in which early 17th century political literature and modern cancer research transforms sociopolitical ideology (and vice versa) in their respective periods – the presentation will highlight the surprising ways in which science and ideology intersect.

**Jessie Lau** is a sophomore pursuing degrees in English and Interdisciplinary Studies with a focus on international relations at the University of California, Berkeley. Highly interested in media and global affairs, she currently writes for Berkeley Political Review’s international section and works as an Events Committee Officer for the International Students Association at Berkeley. Originally from Hong Kong, Jessie is also passionate about travel and the performing arts.

**Adrian Tabula** is a third-year Bioengineering major at UC Berkeley with research interests in cellular signaling, stem cells, and cancer biology. Currently, Adrian works in Dr. Dan Fletcher’s lab studying gene expression in response to mechanical forces. He has been involved in multiple research projects, and is a Design Team Manager for Engineering World Health. Aside from his work in academia, Adrian enjoys listening to Radio Lab, painting, and brewing traditional-style Chinese tea.

“The All-Terrain-Vehicle and Geographies of Coalfield Masculinities”

The specter of ‘white trash’ haunts Appalachian whiteness. Policy makers and local peoples alike have long prescribed a modernization discourse to the ‘problem’ of Appalachian poverty. In the last thirty years the all-terrain vehicle (ATV) became widely popular in the Appalachian coalfields, part of working class consumerism contingent on a male-dominated coal mining industry. This research examines ATVs as material and symbolic evidence of coalfield political economic, and cultural subjectivity, finding the device to enact two distinct, and conflicting, masculinities. The device is used to access the virtual commons, the coal, timber; and land company owned forested or surfaced mined hills. People (men mostly) collect forest products and hunt on these lands, enacting a masculine identities tied to using nature productively. A budding tourist industry has created a new territoriality in parts of the West Virginia coalfields, making private ATV trails, excluding non-ticketed or uninsured riders, relying on masculinities tied to wage-earning, consumption, and adventure sports. I argue that the new access regime is an enactment of modernization discourse, developing economies out of the open access forests and mined lands, striving to whiten the Appalachian coalfields. This enacted discourse helps explain why many coalfield residents support the coal industry.

**Gabe Schwartzman** is a UC Berkeley Undergrad in Geography, with a focus on nature and subjectivities in the Appalachian coalfields. He has been involved in southern West Virginia coalfield activism since 2009, and conducted an oral history of a surface mine impacted community on a Human Rights Center Fellowship in 2012.
Marriage education began at UC Berkeley in 1939 as a series of sex lectures, quickly evolving into one of the most popular courses on campus for the next two decades. Through the years, the focus shifted from purely sex to marriage as a whole. At the same time, the course evolved from one rooted in the “hard” sciences of medicine to one based in the “softer” science of sociology. Consistently, the professors used scientific terminology to address changing gender roles in the wake of World War II and used their role as an authoritative figure to provide counseling and guidance. In this way, science could be used to both justify and dictate human behavior, allowing the University to influence individual student behavior. Today, sexual education at UC Berkeley returns to its hard science roots through classes like IB 140 (Human Reproduction). The difference in the way this course addresses sexual differentiation and gender roles illustrates the significance of movements like women’s liberation and the gay rights movement on scientific curriculum. At the same time, the course allows for the professor’s personal opinions concerning gender binary and health recommendations. The comparison indicates the continuation of scientific instruction as a means to legitimize a faculty member’s advice and guidance.

Katie Fleeman is a fourth year History major finishing up her degree and figuring out the future. Her research interests tend to focus on UC Berkeley history, with a particular emphasis on the role of women in the twentieth century. She is currently writing her thesis on marriage education classes at UC Berkeley, which forms the basis for her presentation. In her spare time, Katie plays piccolo in the Cal Band and tutors in San Quentin. She is excited to be a part of this symposium and can’t wait to see what everyone has to offer!

Bidil, approved by the FDA for race-specific prescription, is marketed as a preventative heart-failure medicine for African Americans. In Bidil, one can observe the pharmaceutical industry’s endeavor to provide a niche-market (i.e. race-specific) product backed by promising scientific research. However, how the research statistics are employed/manipulated in favor of the pharmaceutical company’s motives must be examined. Viewing Bidil’s societal implications, it is entirely based on American structural understandings of race. Bidil creators take a socially constructed term, African American, and apply the term in a biomedical context, assuming a correlation between two separate realms: the social and genetics. It is impossible to define African Americans genetically, yet Bidil claims to transcend this implicit gap between genetics and the social (i.e. the fundamental distinction, nature and nurture), a dangerous assumption. Further, the studies that support Bidil fail to take into account variables outside of race (e.g. diet, environment, socioeconomic locale). Even worse, there is no explanation as to why the medicine was more effective in African Americans. Bidil assumes a connection between race and genetics where no such connection exists. Race is social, medicine is biological: the distinction must be recognized.

Matthew Kurkjian studies Philosophy and Sociology at UCSC, with a deep interest in how the two disciplines intersect in analyses of science, community, and technology. He is fascinated by the transformation of society with inventions like the internet and advanced medicine. One could say his broad point of focus is how the quickening pace of ‘progress’, in our day and age, is affecting how we view what it is to be human.

The science of organ transplant is undoubtedly fascinating, but organ transplant isn’t simply taking an organ from one body and placing it in another. The transplant process is a multilayered system of interdependent parts encompassing an incredibly extensive infrastructure. It is laden with interlocking moral/scientific judgments through the evaluation of individuals’ “good candidacy” and rightful placement on the transplant list. The transplant process both personalizes and depersonalizes. It is a journey that begins long before the organ exchange and continues long after. This presentation will implode the heart transplant process by examining the experiences of Natalie Poveyssi’s family in November 2011, when her father underwent a heart transplant at Stanford Medical Center.

Natalie Poveyssi is a sophomore Sociology major and Conservation and Resource Studies minor at UC Berkeley. She is a member of the UC Berkeley Center for Science, Technology, Medicine, and Society Undergraduate Group and is the Managing Editor of the Berkeley Undergraduate Journal. She is interested in social policy, bioethics, the sociology of science, and science and the law. When not reading copiously for school, she enjoys reading copiously for fun but unfortunately does infinitely more of the former than the latter.

“The Heart Transplant Process: A Narrative”
Sleep paralysis is a relatively harmless phenomenon that occurs to approximately 6% of people upon falling asleep or awakening, due to consciousness being present for several seconds or minutes while REM produces a typical complete muscle atonia to prevent people from acting out their dreams. It is associated with visual and auditory hallucinations, out of body experiences, and terrifying visions of intruders to which one cannot react. Scientists and sociologists have speculated on connections between this phenomenon and reports of alien abduction, ghostly encounters, prophetic visions, and various supernatural and folk beliefs around the world. Certain commonalities in the experience draw a distinct difference between this phenomenon and nightmares, the latter being the most common, yet incorrect, explanation. My video that attempts to visually depict the experience of sleep paralysis as distinct from bad dreams, with the goal of seeing if anyone viewing the video recognizes this as a phenomenon they have experienced. This study intersects the fields of medicine, psychology, film and media, music, rhetoric, cultural cognition, comparative literature, mythology and folklore, neuroscience, and religious studies.

Alan Niku is a 4th year Cognitive Science Major minoring in Creative Writing. His interests include perception, linguistics, sleep pathology, synaesthesia, cultural cognition, and other mind-related fields, along with Comparative Literature, Theology, music, rhetoric, mythology, and other mind-boggling fields. With a strong interest and background in filmmaking, Alan enjoys bringing together multiple forms of media to communicate ideas. He experiences sleep paralysis on a fairly regular basis.

“Audiovisual Representation: The Effects and Experience of Sleep Paralysis”

Sleep paralysis is a relatively harmless phenomenon that occurs to approximately 6% of people upon falling asleep or awakening, due to consciousness being present for several seconds or minutes while REM produces a typical complete muscle atonia to prevent people from acting out their dreams. It is associated with visual and auditory hallucinations, out of body experiences, and terrifying visions of intruders to which one cannot react. Scientists and sociologists have speculated on connections between this phenomenon and reports of alien abduction, ghostly encounters, prophetic visions, and various supernatural and folk beliefs around the world. Certain commonalities in the experience draw a distinct difference between this phenomenon and nightmares, the latter being the most common, yet incorrect, explanation. My video that attempts to visually depict the experience of sleep paralysis as distinct from bad dreams, with the goal of seeing if anyone viewing the video recognizes this as a phenomenon they have experienced. This study intersects the fields of medicine, psychology, film and media, music, rhetoric, cultural cognition, comparative literature, mythology and folklore, neuroscience, and religious studies.

Alan Niku is a 4th year Cognitive Science Major minoring in Creative Writing. His interests include perception, linguistics, sleep pathology, synaesthesia, cultural cognition, and other mind-related fields, along with Comparative Literature, Theology, music, rhetoric, mythology, and other mind-boggling fields. With a strong interest and background in filmmaking, Alan enjoys bringing together multiple forms of media to communicate ideas. He experiences sleep paralysis on a fairly regular basis.

“A Tuber With Many Names: Story-telling from Waorani Territory”

The central investigative question of this project is multiple and tubered just as the subject(s) of the presentation are tubers, meaning that the center-point of this presentation is a tuber that grows in the Americas. The presentation will address how “storytelling globalization” as a methodological practice in the academy could be a means towards symmetrical power relations between the “anthropologist” and her interlocutors (Blaser 2007) as well as a method for troubling creatively the nature-culture dualism (and other dualities) of Western thought. While grappling with the meta-questions around storytelling globalization and giving a working definition of what the presenter thinks this means, the presentation will give context to theory through stories from the presenter’s time in the Ecuadorian Amazon where she witnessed Waorani society in transition and is telling stories about this transition. The Waorani are a recognized ethnic group of Ecuador who live as trekkers, hunter-gathers and subsistence agriculturalists in the Amazon. Their society has undergone significant negotiation in the past sixty years as oil interest and missionaries colonize their ancestral territory. This is a presentation that intersects the uncertain boundaries of Anthropology, Feminist Studies, Philosophy, Natural History and as well as touching upon issues of gender, privilege, power, and how and what gets to count as indigeneity. The centrality of the presentation is in Manioc esculenta also known as Tapioca, Manioc, and Yuca, or in Waorani society: Keme.

Nadia Lucia Peralta, UC Santa Cruz. Nadia is passionate about and committed to indigenous peoples movements for socionatural sovereignty. She has been deeply inspired by Diné (Navajo) resistance to Peabody coal mining in Arizona and to the Waorani (Amazon, Ecuador) resistance to oil extraction in their ancestral territories. She and her black and orange puppy-cat live with Ohlone Territory. She believes storytelling is a form of sorcery and this is why she loves ethnography.

“A Tuber With Many Names: Story-telling from Waorani Territory”

The central investigative question of this project is multiple and tubered just as the subject(s) of the presentation are tubers, meaning that the center-point of this presentation is a tuber that grows in the Americas. The presentation will address how “storytelling globalization” as a methodological practice in the academy could be a means towards symmetrical power relations between the “anthropologist” and her interlocutors (Blaser 2007) as well as a method for troubling creatively the nature-culture dualism (and other dualities) of Western thought. While grappling with the meta-questions around storytelling globalization and giving a working definition of what the presenter thinks this means, the presentation will give context to theory through stories from the presenter’s time in the Ecuadorian Amazon where she witnessed Waorani society in transition and is telling stories about this transition. The Waorani are a recognized ethnic group of Ecuador who live as trekkers, hunter-gathers and subsistence agriculturalists in the Amazon. Their society has undergone significant negotiation in the past sixty years as oil interest and missionaries colonize their ancestral territory. This is a presentation that intersects the uncertain boundaries of Anthropology, Feminist Studies, Philosophy, Natural History and as well as touching upon issues of gender, privilege, power, and how and what gets to count as indigeneity. The centrality of the presentation is in Manioc esculenta also known as Tapioca, Manioc, and Yuca, or in Waorani society: Keme.
Due to new surgical techniques and advancements in medical technology within the past thirty years, babies born with complex congenital heart disease (CCHD) have been able to survive into adulthood in larger numbers than ever before (Warnes et al. 2001). Because this population is so new, there does not yet exist a formalized certification program for physicians who specialize in adult congenital cardiology, leaving adults with CCHD the most underserved cardiac subspecialty (Warnes et al. 2001; Warnes 2005). Thus, the effects of aging with CCHD have not been significantly studied medically or socio-culturally. Through personal interviews and content analysis, this study aims to get a better understanding of the lived experience of female adults who were born with complex congenital heart disease and how their CCHD has affected their careers, relationships and access to medical care. The results show that complicated barriers to access impact the lives of the women in my study the most; navigating unprecedented medical and social situations prove to be just as complex as the disease itself.

Kaitlin Kimmel is in her fourth year at UC Berkeley where she studies Medical Anthropology and Disability Studies. As an interdisciplinary studies major with an area of concentration in Critical Medical and Disability Studies, her research interests include science, technology, medicalization, power, and the intersections of chronic illness, disability, death and medicine. Motivated primarily by her experiences of having had five open-heart surgeries and one brain surgery by the age of nineteen, Kaitlin is interested in the research of others who are able to challenge the way knowledge is traditionally produced by insights and perspectives gained from their uncommon life histories. As a 2012 McNair and a 2013 Haas Scholar, she has been conducting ethnographic research on the lived experience of adults with complex congenital heart disease, the first generation of people to have survived into adulthood with this life-threatening disease itself.

Ayden Parish studies linguistics and queer theory at UC Berkeley, as well as outside strictly academic environments. They're interested in psychiatric discourse and the categorization and medicalization of identities, particularly transgender and autistic identities, with a constant eye towards critical disability and gender theories.

"Death, choice, and moralities in American hospitals"
In the past century, life-sustaining technology has become regularly involved in patient care. After WWII, new technologies, like the mechanical ventilator, were increasingly developed and used to sustain human life. To quote Sharon Kaufman in her book, And a Time to Die, “more Americans die in hospitals than anywhere else;” and “one-quarter of all hospitalized patients are treated in intensive care or cardiac care units before they die.” My research, to be discussed in this paper, seeks to make clear that patients struggle with deciding if and how they should use the available medical technologies that are offered near the end of life. I argue that the proliferation of life-sustaining medical technologies has colored both lay and biomedical understandings of death – manufacturing a climate of moral ambiguity in discussions about choice, as a concept and as a process.

Michael Sadighian is an anthropology student at UC Berkeley, with specialized interest in medical anthropology. His research interests concern clinical interactions, epistemologies, and the question of “progress.” Mr. Sadighian is currently working on his senior thesis, which examines how HIV challenged biomedical knowledge and practice in the 1980s. Down the line, Sadighian wishes to practice clinical care and to continue his research as a physician-scholar in medical anthropology.

"Stories from the Heart: Biosocial Narratives of Women with Complex Congenital Heart Disease"
Due to new surgical techniques and advancements in medical technology within the past thirty years, babies born with complex congenital heart disease (CCHD) have been able to survive into adulthood in larger numbers than ever before (Warnes et al. 2001). Because this population is so new, there does not yet exist a formalized certification program for physicians who specialize in adult congenital cardiology, leaving adults with CCHD the most underserved cardiac subspecialty (Warnes et al. 2001; Warnes 2005). Thus, the effects of aging with CCHD have not been significantly studied medically or socio-culturally. Through personal interviews and content analysis, this study aims to get a better understanding of the lived experience of female adults who were born with complex congenital heart disease and how their CCHD has affected their careers, relationships and access to medical care. The results show that complicated barriers to access impact the lives of the women in my study the most; navigating unprecedented medical and social situations prove to be just as complex as the disease itself.

Kaitlin Kimmel is in her fourth year at UC Berkeley where she studies Medical Anthropology and Disability Studies. As an interdisciplinary studies major with an area of concentration in Critical Medical and Disability Studies, her research interests include science, technology, medicalization, power, and the intersections of chronic illness, disability, death and medicine. Motivated primarily by her experiences of having had five open-heart surgeries and one brain surgery by the age of nineteen, Kaitlin is interested in the research of others who are able to challenge the way knowledge is traditionally produced by insights and perspectives gained from their uncommon life histories. As a 2012 McNair and a 2013 Haas Scholar, she has been conducting ethnographic research on the lived experience of adults with complex congenital heart disease, the first generation of people to have survived into adulthood with this life-threatening disease itself.

Ayden Parish studies linguistics and queer theory at UC Berkeley, as well as outside strictly academic environments. They’re interested in psychiatric discourse and the categorization and medicalization of identities, particularly transgender and autistic identities, with a constant eye towards critical disability and gender theories.

"Making the breeding network: the development of maize genetic resources after 1970"
This project examines the animation of maize genetic resources, in this case the off-shore development of disease resistance gene pools to be deployed by United States and Central American breeders. My study traces the historical geography of
an inter-American germplasm system, highlighting how specific crop ecologies come to matter insofar as they become newly related to novel places, people, and events. My story’s protagonist is NB-6, a classic open-pollinated maize variety of Nicaragua’s national agricultural institute and the cohering theme of this tale. Narrating the variety’s genesis lends embodied form to sometimes static, or abstract, understandings of international genetic resources and their production. The dynamics of a stress breeding networks are illustrated here through the ironies and in Nicaraguan-US relations in the 1970s and 80s. In telling a story, though, particular narrations risk devaluing or silencing others. How best to craft a history of the variety’s assembly and evolution? I first encountered the NB-6 lineage through exchange networks of campesino farmer-breeder and producer cooperatives in 2011 and 2012 in the mountains of northern Nicaragua, as a young researcher and aspiring seedsmen. Today my own productions engage both story and seed growing as serious tools in forging solidarity-oriented, farmer-to-farmer linkages.

For the past two years, Eric George has followed seed through social and agroevolutionary knotting alike. Maize breeding systems offer rich case studies that have been formative in his early growth as a seedsmen and scholar. Eric is grateful for the political education and engagements made available to him by mentors and peers in Northern California and Nicaragua. At present, he is farming on the northern slopes of the Siskiyou Crest, at the Oregon-California border. He is apprenticing with a diversified food, seed, and medicinals farmer in 2013 through the Rogue Farm Corps, a regional program to train the next generation of farmers.

"Searching for the “unenhanced body”: a performative (de)composition”
In 1960, Yvonne Rainer initiated a tradition of experimental postmodern dance by redefining the body as “actual weight, mass, and unenhanced physicality”, and declared that the body “remained the enduring reality”. Though this exploration of weight, physicality, and density continues today in the work of many choreographers, I would argue that the precise and clean boundaries of the “unenhanced body” have become difficult to define. Since its inception in 2005, YouTube has increasingly become one of the principle sites of dance performance and publicity. This not only pushes one to consider the collision between the physicality of the body in space and its transcription into video, but also the particular presentional capacities of YouTube, wherein the viewer is inundated in advertisements, and images. YouTube becomes a site that muddles distinctions between kinds of movement, kinds of “presence”, and kinds of bodies. This short mixed media work is in an attempt to delve, physically and analytically, into the sites of collision, morphism, and cross-contamination that appear when the extra-linguistic exploration of the body as a pure and unquestionably separate entity is transcribed into a two-dimensional and purposefully legible sphere of production. In this short composition I ask: how does the transposition of experimental dance into YouTube as a venue affect the conceptual work of signifying and narrating the “unenhanced body” that is being done in choreography?

Sara Linck-Frenz is a Comparative Literature student, but in her four years at UCB has successfully avoided settling down in any one department. Though she started out her time at Berkeley languishing in the eddies of language and its inscription on everyday life, she has become increasingly intrigued by the affect of the material, the physical, and the bodily on our perceptions of reality. She spends most of her time exploring the anatomical, political, and metaphysical corners of “the body”, occasionally distracted by bouts of baking, Irish country dancing, and debates about political participation in Venezuela.

“Engineering Posthumanity: Social, Economic, and Biological Implications of the Transhumanist Movement”
Transhumanism is a philosophical and scientific movement that seeks to push human-beyond its natural “weaknesses” using bioengineering. Limits of intellect, strength, aging, and even death itself are all qualities of the human being as we know it that Transhumanists view as public health concerns to be overcome. Though the Transhumanist mission is implicit in much of modern biological research (i.e.- finding cures for diseases to prolong average life spans), we argue that there is an ethical distinction between research which seeks to bring the disadvantaged to “species-normal” health levels and the “superhuman” or “posthuman” that Transhumanists aspire to create. Although smarter, stronger, or longer-lived homo sapiens seem objectively appealing, Transhumanism carries possible implications for societies an economies that warrant consideration. An evolutionary divergence in the human population, caused by uneven enhancement technological distribution, would be detrimental to the progress of an egalitarian trajectory for development. Because unnaturally prolonged human life spans would exacerbate overpopulation, thus pressing societies to compete more vigorously for scarce resources and to grapple more expeditiously with the ecological limitations of consumption, the Transhumanist movement may actually harm the prospects of human flourishing, regardless of how integrated some believe humanity may become with technology.

Ryan Williams is an undergraduate at the University Of California, Berkeley, studying Molecular Environmental Biology with a concentration in Animal Behavior as well as pursuing a minor in Gender Womens Studies. Her current research is involved in The Museum ofVertbrate Zoology and she is interested in pursuing research in combined
Benjamin Schaub is an undergraduate currently spending the year working as a research assistant to Professor Beverly Crawford in the Institute for European Studies at UC Berkeley. Since coming to Berkeley, his recent projects have included analyses of the diffusion of German policy practices within the European Union and comparisons of the qualifications for successful revolution and democratization in developing economies. His personal research interests are 21st century foreign policy planning to address issues like climate change and global pandemics, and reforming international institutions to meet these new challenges.

“A New Eternal Flame: The Preservation of Identity Through Social Media”
Facebook is a popular social networking website that allows people to create complete representations of themselves through online profiles. Profiles capture a person’s image, his or her interests and the way that he or she relates to the people around them. But how does a Facebook profile function when the person it represents is deceased? This question can be answered using N. Katherine Hayles’ work How We Became Posthuman as well as David Mitchell’s novel Cloud Atlas. Hayles’ work demonstrates how the relationship between humans and technology affects a person’s identity and the ways that technology, such as Facebook, can make the physical presence of a person secondary to the pattern of their existence. A person’s pattern can be recorded by technology and preserved for as long as the technology lasts. Cloud Atlas is a fiction that shows the ways that the preservation of this pattern is enough to preserve a person’s identity, even after s/he dies. Remembrance becomes the act of observing someone existing in the medium of technology rather than an act of imagining him or her present.

James Pierce is a senior at UC Davis. He studies English with an emphasis in literary criticism.

“Access Impediments to drinking water in California”
Currently there are communities across the state of California that do not receive potable water due to contamination in the water supply. In rural and urban parts of the state there are disadvantaged communities without funds to pay for projects intended to address the issue. This paper closely examines two communities in California that contain contaminants in their drinking water by investigating the type of pollutants, the measures being taken to address the contamination and the challenges to overcoming the issue. I present the environmental justice challenge of drinking water in California with the framework of the Human Right to Water Package that passed in 2011. Under this legislation, the Assembly Bill 983 provides 100% grant funding to severely disadvantaged communities. To diversify the investigation, I examined Alpaugh, a small rural community in the Central Valley with a history of natural occurring arsenic contamination, and Maywood, a densely populated urban region of Los Angeles with a legacy of industrial pollutants in the ground water. In certain communities funds are starting to be seen to finance the preliminary studies, which has historically been a significant hurdle for communities to implementing projects. However for many communities still one of the most striking impediments to the effectiveness of the legislation AB 983 is the awareness of its existence in the communities. While the legislation does eliminate certain hurdles to implementation, these communities still face the challenges of access to information, sustainable finances and finding long-term solutions.

Lindsay Dreizler is a fourth year undergraduate student at UC Berkeley pursuing a major in Conservation Resources Studies with an emphasis in Aquatic Resource Conservation and a minor in Forestry and Natural Resources. Her coursework covers the intersection of ecology, environmental justice and natural resource management. Lindsay has sought an enriching path for herself undertaking studying abroad in Santiago, Chile and extensive traveling in Latin America. She is currently completing the Undergraduate Research Apprentice Program with the organization Nuestra Agua to contribute to a working literature review examining small-scale water provision models in Latin America. Shaped by these experiences, she aspires to work with communities in the fields of water and environmental justice.

“In Small Things Forgotten: The Value of Archaeological Micro-debris in Unraveling Dhiban’s Imperial Past”
This project explores the potential of the analysis of miniscule artifacts excavated from the archaeological sites worldwide to investigate the degree of cultural information lost when only examining larger artifacts. Specifically this research uncovers the benefits of archaeological micro-debris, which are cultural and biological remains less than 4 mm in size, to provide new insights into people’s daily lives when compared against larger sized artifacts. Using a multi-disciplinary approach to construct comprehensive narratives on the past, this project uses the archaeological site of Dhiban, Jordan, dating to the complex Middle Islamic period (ca. 12 - 15th century CE), as a case study to compare these methods of analysis. My analysis reveals that smaller residue sizes often provide information distinct from larger residue sizes, especially in the ubiquity or presence of different materials. This high-resolution investigation of both large and small residues, as well as the use of collaborative investigative techniques, facilitates the identification of past quotidian cultural activities in this context and begins to construct....
a concrete narrative on greater social, political and economic trends, including the impact of state actions on local communities throughout this region.

Nicholas Ames is a senior undergraduate student at the University of California, Berkeley majoring in Anthropology with a focus in Archaeology and minor in Ancient Egyptian and Near Eastern Civilizations. His current research focuses on the methodology employed in archaeological field practices, specifically the use of microdebris in artifact analysis and site interpretations. Nicholas is an intern archaeologist for Heritage Discoveries Inc., a CRM firm located in central California, as well as a student archaeologist for the Dhiban Excavation and Development Project (DEDP) working in Dhiban, Jordan. Any questions can be directed to nicholas.ames@berkeley.edu.

“Towards a Political Ecology of Breast Cancer Epigenetics”

As incidences of human breast carcinoma increase as a function of industrial expansion, the field of epigenetics is predicted to become the next scientific breakthrough in the study of cancer etiology given its association with the environmental processes which influence phenotypic expression of disease. After a close engagement with the literature, this study argues that modern epigenetics cancer research may further marginalize the complex social, economic, and even environmental factors of the condition in favor of descriptions which situate the problem of cancer as one located exclusively in the molecular world. This presents a contradiction because the study of epigenetics focuses on hereditable changes independent of genetic mutation—that is, the biochemical alterations induced by ‘external’ stimuli like poverty and exposure to synthetic chemicals such as pesticides. This conceptualization, as we shall see, reveals the inadequacy of most efforts to address the problem that is breast cancer. Political Ecology, because of its emphasis on political economy, environmental change and the politics of scientific thought and interpretation, may help broaden and ameliorate this inadequacy.

Alfonso Aranda is a graduate school-bound senior from Dixon, CA working under the mentorship of UC Davis geographer, Dr. Diana K. Davis. His research interests include: political ecology, science/tech studies, history of Mexico, cancer social science, and environmental justice. Additionally, he has had the privilege of speaking on behalf of the farmworker community. A few things he is passionate about are reading/writing, friendship, work, and creating art.

The group is thankful for the catalyst of John Naccarato’s work, the timely contribution of caraballo-farman’s imaginations, all combined with the uncommon, uncertain, and boundary-pushing work of undergraduates from UC Berkeley, UC Davis, and UC Santa Cruz.

CSTMS undergraduate group

Alli Yates, coordinator
Natalie Oveyssi, coordinator
Ian Brown (UC Santa Cruz)
Gabriela Berman
Leslie Yeh
Spreeha Debchaudhury

Deepest thanks to Cori Hayden and Kristine Yoshihara, without whom this event would not have been possible. We thank Mary Sunderland, Diana Wear, and the rest of CSTMS for their constant fortifications and inspiration, and extend our gratitude to the Townsend Center and the Department of Gender and Women Studies for their enthusiasm and support. Countless friends and conveniently located ears might escape name but are greatly appreciated nonetheless.

The group is thankful for the catalyst of John Naccarato’s work, the timely contribution of caraballo-farman’s imaginations, all combined with the uncommon, uncertain, and boundary-pushing work of undergraduates from UC Berkeley, UC Davis, and UC Santa Cruz.