

PROGRAM ABSTRACTS

All events--except dinners--free and open to the public

FRIDAY, APRIL 11

4:00-5:30 p.m. Reception with cash bar, Marriott Room, Campus Center 11th Floor

5:30-6:30 p.m. Dinner (buy dinner tickets on Registration site), Marriott Room, Campus Center 11th Floor

7:00-9:00 p.m. "Science for the People: Stories from the Movement" | Room: Thompson 102

Former members of Science for the People will be interviewed by UMass students and will respond to questions. Including Carol Cina, Britta Fischer, Herb Fox, Terri Goldberg, Michael Goldhaber, and Al Weinrub.

SATURDAY, APRIL 12

9:00-11:30 a.m. Plenary Panel: "The History and Lasting Significance of Science for the People" | Room: Thompson 102

Sigrid Schmalzer. Professor of History, Director of Social Thought & Political Economy, UMass Amherst. Chair.

Kelly Moore. Professor of Sociology, Loyola University Chicago. "Knowledge for Justice: Science for the People in the Context of Scientist Activism"

Science for the People was formed in 1969, at the annual meeting of the American Physical Society. In their call to organize a new group, SFP founders wrote that their aim was to regain their "full intellectual and political freedom," and that they would work for change starting where they were—in their laboratories, in their professional societies, and at their universities. The war in Vietnam was the immediate impetus for the formation of the group. The US government hoped to defeat the North Vietnamese with firepower and new (and gruesome) weapons, drawing ever more scientists into its weapons-making, and weaving universities into a web of funding and knowledge production that meant that other human needs and knowledges were underdeveloped. Returning to their own universities and workplaces, members of Science for the People quickly expanded their analyses of the politics of science. Over the next two decades members participated in a remarkable range of projects, including lending their own knowledge to and learning from agricultural projects in Puerto Rico and Latin America, creating new methods for teaching science, challenging the science and politics of racial sciences, challenging professional associations to do more than promote the narrow interests of their members, traveling to China to see science "walking on two legs," and working with unions on occupational health projects.

What was remarkable and distinctive about Science for People was that its members insisted that not only should the outcomes of science be for the benefit of "the people," but that the processes by which science was created should also be just. That word was not likely uttered by members of the group, but it captures what even in a heterogeneous group like Science for the People was a never-ending (and likely sometimes exhausting) effort to include those who could benefit from or be harmed by science into its

processes of knowledge-making. It is hard to underestimate what a radical break this was from what their peers were doing, and how important it is for the technopolitical problems we face today. At an historical moment when we face an extraordinarily uncertain socio-environmental future that will likely revive old—and unworkable—solutions, Science for the People's accomplishments and techniques are all the more relevant.

Susan Lindee. Professor of History and Sociology of Science, University of Pennsylvania. "SftP and the 'Hidden Curriculum' of Cold War Science"

In this paper I explore perspectives on the practice and experience of being a scientist in the 1960s, considering the "hidden curriculum" of cold war science and its relation to the core issues animating the development of Science for the People. As physicist David Kotelchuck noted in a 1991 interview describing his early work with SftP, there was no way out. While he was protesting the war, he was also training PhD students who would do military research. No matter what you do, his comments suggested, technical knowledge always leads back to the battlefield. The generation I focus on had learned in the course of their formal education in the 1930s and 1940s that science was open, universalistic, internationalistic, and an endeavor focused on the "welfare of mankind". Yet in practice, in the heart of the Cold War, for many scientists, their research was not open but secret, not internationalistic but nationalistic, and not conducive to welfare but engaged with the sophisticated technical production of injury to human beings— new weapons, new surveillance methods, new information systems, even new ways to interrogate prisoners using psychological insights, bring down economies, or start epidemics—"public health in reverse"—biological weapons. Experts in fields from physics to sociology found their research calibrated to empower the state, and scientists trained to see themselves as creating knowledge as a social good found themselves engaged in something that felt very different to them. Professional societies from the AAAS to the ASM to AAA to ACS created committees on "social issues" and produced statements on science and the "welfare of mankind" through the 1950s, 60s and 70s, while their members made weapons and worked in the defense industry. My work explores not policies, weapons, discoveries, political forces or institutional contexts—not transnational science, but everyday professional life. I ask how scientists at the height of the Cold War experienced their relevance to the state's monopoly on violence. I am interested in what they told each other about surviving this new world—what advice they gave new PhDs, and what they said to each other about their experiences.

Sarah Bridger. Professor of History, California Polytechnic State University. "Science at War: Anti-Militarism and the Critique of Professional Neutrality in the Origins of SftP"

This talk examines the contentious debates about neutrality and activism within the scientific community during the Vietnam War era. From "insider" and "outsider" strategies of activism to arguments that academia and professional organizations ought to chart a neutral, apolitical path, the late 1960s and early 1970s saw scientists and engineers struggling mightily with the ethical consequences of working in fields dominated by a military-industrial-academic complex. In this context, Scientists and Engineers for Social and Political Action (SESPA) and its spinoff Science for the People (SftP) offered radical critiques of the assumption that science could be neutral or apolitical. Within the physics community in particular, these debates divided the American Physical Society and forced science advisors to the Pentagon to account for their actions in the face of substantial public protest.

Alyssa Botelho. BA, Harvard College 2013. "SftP and the 1976 Cambridge Recombinant DNA Controversy"

In summer 1976, Science for the People became involved in a controversy over the construction of a high-containment lab at Harvard designed for work with "recombinant DNA," a technology that allowed

biologists to artificially transfer genes of choice from one organism to another for the first time in history. Recombinant DNA is now a staple in the biology lab—it has paved the way for the Human Genome Project and the rise of the modern biotech industry. But in 1976 studies over the technology's safety were scant, and SftP biologists and supporters—including Ruth Hubbard, Richard Lewontin, Jonathan King, Jonathan Beckwith, Richard Goldstein, and George Wald—grew concerned that Harvard's lab construction plans were hasty. They broke from their colleagues to bring concerns about recombinant DNA's environmental and health risks, as well as questions about its ethical use, to the Cambridge public. Their plea was heard in two hearings before the Cambridge City Council, who declared a 7-month ban on the technology and charged a council of nine lay citizens (one of whom was SftP member Sheldon Krimsky) with the decision to lift the ban and allow for lab construction to begin. In recombinant DNA, Science for the People found a cause that united threads of activism rooted in ongoing nuclear disarmament, environmentalism, feminism, and workers' rights movements. They voiced a skepticism, too, of their colleagues' faith that technological advance could truly bring about social good. In this local history, I hope to provide yet another example of Science for the People's efforts to unite the duties of scientist and activist and promote the local governance of science.

Peter Taylor. Director, Science in a Changing World, UMass Boston. "The More and Less Visible Colleges of Marxist Scientists and Critics"

Comments to follow from SftP members Rich Rosen and Lorne Taichman

1:00-2:30 p.m. 4 concurrent panels

Science and Ideology | Organizers: Abha Sur and Katherine Yih | Room: Cape Cod Lounge

Katherine Yih, Ann Arbor SftP member. "How do we do 'science for the people'? The role of ideology"

Science for the People (SftP) was part of a larger social movement, growing out of the anti-Vietnam-War movement and interconnected with other national liberation movements, U.S. liberation movements of people of color and of women, the labor movement, and the environmental movement. The ideology was predominantly Marxist, although there were strong anarchist currents as well as non-Marxist feminist and even early post-modernist currents (although that term had not yet been coined). Although SftP was affected by the sectarianism prevalent in the left party-building period of the late 1960s and the 1970s, by and large its membership was able to unite around a broad anti-imperialist, anti-capitalist, pro-liberation political agenda and contribute to important struggles around science and technology and to science itself. Informed and inspired by radical left ideologies and philosophies, SftP members engaged in several distinct but interrelated categories of activity, including the critique of science, the formation of new allegiances, and the posing of new scientific questions lying outside of the conventional paradigm. The professional and political choices made by SftP members have relevance to scientists and activists today.

Abha Sur, MIT. "Science, Solidarity, and Resistance: The Transformational Politics of Science for the People"

SftP was based on an understanding that a socially just, materially sustainable and economically equitable society demanded a new science and technology—a liberating science organized to serve the people instead of wars and corporate profits. Thus, SftP not only offered a sustained and trenchant critique of science under capitalism, but, and perhaps more importantly, provided exciting new ways of

doing science. In particular, feminist and socialist scientists with their insistence on a dialectical interaction between an organism and its environment, and between culture and human biology transformed our understanding of sex, gender, and race. Further, they made community organizing and political solidarity an integral part of their scholarly life and in so doing afforded a glimpse into what might a liberating science look like.

Doug Boucher. Union of Concerned Scientists, Ann Arbor SftP member. "Population growth and Science for the People's critique of Malthusianism, in light of recent evidence"

*This presentation will ask how well Science for the People's critique of Malthusian thinking holds up in light of what has happened over the past half-century. The analysis that saw overpopulation as the fundamental cause of underdevelopment was the conventional wisdom in the 1960s and 70s among both liberal and conservative thinkers. This was reflected in such writings and concepts as Paul Ehrlich's *The Population Bomb*, Garrett Hardin's "Tragedy of the commons" and "Lifeboat ethics", *The Limits to Growth* and zero population growth. It went beyond the idea of planned parenthood to insist that population control by coercive means was ultimately preferable to the mass starvation that would be the inevitable result of exponential growth. The tone was one of reluctant but hard-headed realism, in which understanding and following what science tells us had to outweigh sentimental notions of individual rights. Against this conventional wisdom, the radical left, including Science for the People, developed a broad critique of Malthusian thinking and population control policies. It included a strong defense of a women's right to choose based on emerging radical feminism; using conventional social science concepts such the demographic transition to attack the underlying scientific basis of Malthusianism; historical analyses of the link between ideas of population control and eugenics, and campaigns against the racism of forced sterilization and other programs of population control in Puerto Rico, among communities of color in the U.S. and internationally. Although some traced the argument back to Marx' critique of Malthus, much of the anti-Malthusian argument derived from other thinkers such as Ester Boserup. One feature that distinguished radical from liberal thinking at this time, was the willingness to criticize Malthusianism even if that put one on the same side as conservatives such as Julian Simon and Pope Paul VI. Who was right, in light of the evidence of the past half-century? It seems clear that Malthusianism has turned out to be fundamentally wrong in its predictions. Populations have not grown exponentially, and fertility rates have declined steadily – in many countries, to or below replacement level – throughout the world. Countries with Total Fertility Rates (TFRs) that will lead to their populations ceasing to grow or even declining, include not only most of the developed world (e.g. Western and Eastern Europe, Japan, Canada and Australia) but also major developing countries such as China and Brazil. The demographic transition has taken place on every continent, and contrary to predictions, there has been no mass starvation in overpopulated lands. One interpretation of this history is that ultimately, reality won out: that ideologically based ideas such as Malthusianism are unable to predict the future as well as truly scientific analyses, even if they happen to be politically unpopular. This interpretation might be gratifying but its positivist and anti-ideological approach is ultimately contradictory to the spirit of Science for the People and its analysis of how science reflects the society in which it is embedded. Rather, I interpret the ultimate victory of SftP's critique of population control in terms of the rise of feminism and the decline of racism as an internationally acceptable ideology, worldwide urbanization and the end of the Baby Boom. One important piece of evidence in favor of seeing the story as one of competing ideologies rather than as ideology vs. science, is the fact that the victory is still a very partial one. Malthusianism remains an important strain of liberal thinking in the twenty-first century, despite its empirical failure over the past fifty years.*

Dick Levins. Professor of Population Sciences, Harvard School of Public Health. Founding member of Science for Vietnam and SftP in Chicago. “One Foot In, One Foot Out”

As scientists we move in three worlds as investigators of the way the world works, as employees in the knowledge industry, and as activists struggling to make science serve humanity. In our institutions we find common interests with colleagues curious about the same things but also conflict since the owners of the knowledge industry decide who can do science, what are legitimate questions and which are ignored, what solutions are acceptable, and how the discoveries of science are to be used. This gives us the pattern of profound insights at the level of the laboratory and ignorance and irrationality at the level of the whole so that despite developments in geophysics and meteorology the CO2 level is rising, despite nutritional and agricultural science hunger increases, despite the subtleties of molecular biology new infectious diseases appear and old ones return, and despite calls for a complex view of the world we are caught on the brink of complexity, advocating and holding back from seeing real connections.

Math and Computer Technology | Organizer: Robert Shapiro | Room: Campus Center 903

Chandler Davis. Professor of Mathematics, University of Toronto, SftP Member. “Mathematicians against the American War in Vietnam”

Mathematicians against the war in Vietnam organized, after summer 1968, under the name Mathematicians Action Group.

R. D. Ogden. Professor of Computer Science (Emeritus), Texas State University, SftP member. “The N.S.A. and the Ethical Formation of Computer Scientists”

Discussion of the origin of the N.S.A. and the change in its image and internal ethos and an overview of the interesting on-line discussion in the IT community about Snowden & the N.S.A. Brainstorming whether the degree plans and certification programs should contain an ethics component wherein the students clarify the order of their professional loyalties (e.g., which comes first: the public welfare, their employer, #1 etc.). Advocating for continuing the discussion about whistle-blowing on-line and in professional societies, upholding the viewpoint that the duty of an IT professional to promote the public good is greater than his or her loyalty to an employer or other institution.

Robert Shapiro. President, Process Analytica LLC; Chair, Technical Committee — Workflow Management Coalition (WfMC); SftP member. “Computers and the Movement: Critique and Applications”

This talk will explore the relationship between computers and SftP activities, including comments on: Dr. Strangelove: How I learned to start worrying and hate the bomb; Udder profit: the “National Dairy Herd Improvement Project”; NACLA (North American Congress on Latin America): knitting needles and cards follow the money; The Green Movement and Information Systems in 1970; Resource One and the Data Center; SftP training courses in microcomputers and programming; and Patient-oriented Health Records and Tele-health systems.

Steven Brewer. Director, Biology Computer Resource Center, UMass Amherst. “Community Television, Free Software, and Maker/Hacker Communities: Aspirations of Freedom”

Growing corporate control of media, software, and consumer products over the past 50 years has led to three largely separate movements to preserve the ability of ordinary people to access the means of

production of mass media, computer software and, most recently, the technological hardware of modern culture. The movements share an aspiration that transparency and community participation are fundamental to democracy and an egalitarian society. Understanding their history and the reactions to these movements can provide insight into current and future efforts to secure freedom.

Teaching Social Justice in Science | Organizer: Florence Sullivan | Room: Campus Center 905

Roberta Garner (formerly, Roberta Ash). Professor of Sociology, DePaul University, SftP member. “Contested Terrain: Stats, Methods, and Online courses”

New types of knowledge (especially statistics and quantitative analysis in the social sciences and humanities) and new pedagogies (such as online courses) are potentially of enormous value in contention for a more just and humane society. But to some activists they seem inherently inhuman and fit only for use in controlling and manipulating people. To others they are saturated with simplistic positivist assumptions and serve only for mechanical inculcation of “factoids” without challenge, public discussion, or awareness of conflict and contradiction. Frequent testing with multiple-choice quizzes exemplifies the concern that these pedagogies and forms of knowledge stifle critical thinking. The author argues that these methods of research and teaching, such as the new technology of online learning, need to be contested and reclaimed by teachers and researchers with a commitment to social justice and a critical stance. This goal means developing thought-provoking contents and topics for the application of skills and knowledge, reaching new audiences beyond the classroom, and disrupting mechanical forms of teaching and testing.

Ron Eglash. Professor of Science and Technology Studies, Rensselaer Polytechnic Institute. “Generative Justice: Computational Mathematics and Social Self-Organization”

How can we apply science and technology to problems in social justice? Phrasing the question this way implies “social justice” as a static set of concepts; we await its commands. But what if we encourage creative innovation on the social justice side just as we do in science and technology? The NSF-funded Triple Helix project, which brings together grad students and faculty from science, engineering, and social science, as well as community activists—K-12 educators, environmentalists, health activists, culture workers and others—has launched an effort we refer to as “generative justice.” Typically social problems are approached through the top-down forms of “distributive justice”: intervention from government agencies and regulations. But science and technology innovations have opened new possibilities for “generative justice”: bottom-up networks that strive for a more equitable and sustainable world through communitarian value generation. From the maker spaces and open-source DIY movements of “appropriated” technologies to urban agriculture and indigenous collaborations with nature’s non-human agents, frameworks in generative justice seek to allow those who generate value to directly participate in its benefits, create their own conditions of production, and nurture sustainable paths for its circulation. This presentation will focus on how the generative justice framework has utilized computational mathematics, such as fractal models of traditional African design, to encourage bottom-up value generation in the case of both African American urban populations and communities in the West African nation of Ghana.

G. Michael Barnett. Professor of Education, Boston College. “Urban Farming: A Youth-based, Proactive Response to Food Deserts in Urban Neighborhoods”

Steve Alsop. Professor of Education, York University. “Reflections on the Activist Question in Science and Technology Education”

What might activism offer science, technology and education? What might science, technology and education offer activism? This presentation responds to these questions through a series of meta-reflections on an online open access journal, JASTE (The Journal for Activist Science and Technology Education) and associated projects and publications. JASTE has been running for over 6 years and is just set to launch its seventh edition (with a focus on youth-led activism). The presentation offers a background to the journal, highlights emergent themes, and explores some tensions and contradictions. It concludes with four maxims that might helpfully guide, potentially more radical, praxis in science and technology education.

The Militarization of Science: SftP’s Historical Impact and Current Challenges | Organizer: Elke Heckner | Room: Du Bois Library 2601

Jonathan King. Professor of Biology, MIT, SftP member. “Resisting Biological Weapons: Strengthening the Biological Weapons Convention”

Frances Crowe. Former director of Western Mass American Friends Service Committee; Anti-War Activist. “Opposing Anthrax Research at UMass in the 1980s”

In 1989, UMass students, faculty, and staff joined forces with community activists to oppose research on biological weapons (specifically, anthrax) at UMass Amherst. Frances Crowe was then directing the Western Mass chapter of American Friends Service Committee, the most important community-based organization involved in the struggle. Together with SftP member Jonathan King and others, Frances brought a resolution to Amherst town meeting asking the town to become the first community in the country to ban research on biological weapons. Although the resolution did not pass, the effort was successful in raising awareness on the issue. Frances continued to work with students and faculty on campus: after a long struggle and the arrest of hundreds of student demonstrators, the university’s Board of Trustees agreed to stop anthrax research at UMass Amherst. Frances will discuss these efforts, focusing especially on the central importance of student activism in this successful effort to stop “science against the people.”

Elke Heckner. University of Iowa. “Virtual Humans and the Militarization of PTSD Therapies”

Derek Denman. JHU Human Rights Working Group, Department of Political Science, Johns Hopkins University. “Drone Research at the Johns Hopkins University Applied Physics Laboratory”

This paper examines the role of the Johns Hopkins University Applied Physics Laboratory (APL) in drone research. It asks how APL, through its work on robotic warfare, serves not only as a place of scientific and technical creation but as a political space that alters the practice of war, espionage, and state surveillance. The paper traces APL’s unique origins during World War II, their significance for transformations in the political economy of scientific research, and the laboratory’s early culture of classified research. It elucidates continuities between these early research practices and recent research in drone technologies. Examining the case of APL provides insight into the shifting role of the university in the national security state. University laboratories continue not only to provide research into new weapons but also transform the conduct of war and, in the case of drone research, the very identity of those who wage it. Military contracting with universities brings the institution of the university into the

fold of research and production for warfare thereby blurring the distinction between the concepts of warfront and homefront, peacetime and wartime, and military mobilization and civilian life.

3:00-4:30 p.m. 4 concurrent panels

Agricultural Science and Food Justice | Organizer: Sigrid Schmalzer | Room: Cape Cod Lounge

Brian Schultz. Professor of Entomology and Ecology, Hampshire College. Chair.

Sue Tafler. SftP member. "An SftP High School Curriculum: Feed, Need, Greed–Food, Resources, & Population"

In 1974, members of the Science Teaching Group of the Boston Science for the People published an early version of a supplemental program of experiential learning materials for teachers to use with their students. It was intended to bring into social studies, biology, or science and society classrooms discussions of the relationship of food, population growth and the environment. We called it "Feed, Need, Greed: Where Will It Lead?" In the next few years the renamed Food and Nutrition Group of Boston Science for the People considerably revised our alternative curriculum, expanded the teacher's notes, added graphics and photographs, and used more professional-looking typesetting and layout to publish in 1980 a high school curriculum "Feed Need Greed: Food Resources & Population." The four units of "Feed, Need, Greed" were "The Numbers Game: Population and Resources," "The Lean and the Lumpy," "Nutritional-Industrial Complex," and "Building a New World." The various sections provided information not available as part of contemporary curricula, countered common myths, included political and economic analysis as needed, and used opportunities for active learning so that students can incorporate their own experiences.

Margaret Reeves. Pesticide Action Network, SftP member. "Grassroots Science: People powering change on pesticides"

Pesticide use in agriculture causes severe health and livelihood harms to communities on the front lines of exposure—including children, farmworkers, and farm families. When directly-affected communities organize, and develop skills in monitoring, documenting and reporting their exposure to chemical toxins, they are empowered to speak with authority on the social and environmental justice challenges they face, and engage effectively in advocacy to establish health-protective public policy. Pesticide Action Network's Grassroots Science program facilitates community engagement in science in order to build genuine public authority over policy and public resources. A recent evaluation of the program identified policy wins to which our work contributed significantly and provided helpful analysis with which to make our future work even more effective. Successes included establishment of buffer zones for pesticide application in some California counties, creation of a Washington pesticide monitoring program, and re-definition by U.S. EPA of pesticide drift and establishment of federal drift mitigation measures. Among key lessons learned were: 1) in order for monitoring to help drive change it must be part of a well-organized community-based campaign, 2) skillful communications and media work are essential complements to participatory science, and 3) campaigns that involve generation of politically controversial data require time (3-5 years) and substantial capacity-building to counter anticipated push-back by powerful industry interests.

Mike Hansen. Consumers Union, SftP member. "Working with citizen movements and people's organization: Pesticides, Genetic Engineering, and BSE (Bovine Spongiform Encephalopathy)"

Shambu Prasad. Professor of Rural Management and Development, Xavier Institute of Management Bhubaneswar. "Knowledge commons in agriculture: Emerging Peoples science initiatives in India"

Debates on new knowledge in agriculture have often been posed as an inevitable replacement of declining and an ineffective public (sector) science with an ever expanding private sector led science with strong intellectual property rights. Often missing in these debates is the possibility of an alternative science that includes peoples participation. Two agroecological innovations, the System of Rice Intensification (SRI) and Non Pesticidal Management (NPM) have spread rapidly in India in the last decade. This paper/talk would show how this civil society led movements in India offer a new possibility of science for people by creating a new commons in agriculture. These movements have been pro-active in altering the discourse on science that merits closer attention by policy makers and scientists given its potential for addressing some of the challenges in agriculture in particular and science in general.

Challenging Myth of Race and Gender | Organizer: Alan Goodman | Room: Du Bois Library 2601

Jonathan Beckwith. Professor of Microbiology, Harvard Medical School, SftP member. "Science for the People Challenges Biological Determinism"

Since its beginning, SftP has challenged academic biological determinist theories of human behavior. The activities included: critiquing claims of Arthur Jensen and others that blacks were genetically inferior to whites; exposing hospital-based screening of newborn baby boys for the XYY genotype- the supposed "criminal chromosome;" generating controversy over sociobiologists' evolutionary justifications for sexism and the innateness of racism; challenging, beginning with the establishment of the Human Genome Project, the use of the new human genetics to make racial claims. Emerging out of SftP, direct successors such as the Genetics and Society Working Group (GSWG) and Council for Responsible Genetics (CRG) continue these activities. From SftP and its successors have emerged several books, science and journalism conferences, activities at teachers' conferences, the CRG's monthly GeneWatch magazine, and GSWG's workshops at the Boston Museum of Science exhibit on Race and Science. I will discuss how the face of biological determinism has and hasn't changed and to what extent our efforts have been successful.

Anne Fausto-Sterling. Professor of Biology, Brown University, SftP member. "Changing Categories of Gender Critique: From Myths and Bias to Bodies that Matter"

Our first attempts at critiquing the application of biological determinism to the status of women was to argue that bias had somehow inappropriately crept into the practice of science. However, this approach suggests that the practice of science can stand pure and aloof from the social worlds in which it is carried out. Now, however, we understand scientific knowledge as a social product. To understand gender and gendered bodies, we need to record how gendered knowledge and the material body are produced.

Alan Goodman. Professor of Biological Anthropology, Hampshire College. “Scientific Racism and Anti-Racism: 1969 – 2014”

In 1969, Arthur Jensen published a lengthy article in the Harvard Educational Review on race and intelligence, concluding that programs such as Head Start fail because of heritable differences in intellectual ability by race and class. Members of the soon to be formed Science for the People (SftP), quickly saw deep flaws in Jensen’s science and his conclusions. Richard Lewontin, among others, showed that race as a genetic construct was a myth and instead pointed to the enduring role of institutional racism. Responses to Jensen were my introduction to scientific anti-racism and the politics of science. Since 1969, scientific evidence has increasingly shown that races are not subspecies and measured differences, including profound differences in health and wealth, are almost always due mainly to socio-environmental differences. Yet, the drumbeat of racial science continues to echo against popular beliefs about racial differences. The academic award system inhibits scientists from responding to everyday scientific racism. In this paper, I present some of the key scientific interventions by SftP and in the spirit of SftP. I conclude that some progress has been made in dismantling scientific racism, but significantly slowed by the loss of SftP.

Toxics and Occupational and Public Health | Organizer: Frank Mirer | Room: Campus Center 903

Frank Bove. Board Member, Environmental Community Action (ECO-Action), a grassroots environmental organization in Georgia. “Environmental epidemiology for the people: Working with communities on toxic chemicals and the precautionary principle”

I was first introduced to the issues of occupational and environmental health when I began working for SftP. I have been involved in these issues ever since. My talk will describe how my SftP experience has strongly influenced how I conduct environmental epidemiological studies and disease cluster investigations that are part of my job duties, as well as my activism working with communities to fight toxic chemical environmental threats and promoting the precautionary principle.

Scott Schneider. Laborers’ Health and Safety Fund of North America. “Working for workers: Doing Science for the People in the union movement”

Working for unions doing occupational safety and health has been a logical progression for many in Science for the People. This talk will address that path and the various successes and pitfalls along the way.

David Kotelchuck. Professional Staff Congress-City College of New York and Hunter. “An Odyssey from High-Energy Physics to Occupational Health and Safety, with Inspiration from SftP”

I grew up in Jim-Crow Baltimore. After my PhD in high-energy physics, I got my first job in 1962 at Vanderbilt University, where, as in the past, I also pursued civil rights activities, now with SNCC and later its sister organization SSOC. But with teaching and researching by day and civil rights nights and weekends, with all of its turmoil, I felt I was trying to live two different lives at once. Inspired by SftP, I decided to change my focus to a science that would be of more direct help to people. Eventually I met Tony Mazzocchi of OCAW, who asked me and others to help him train his members in identifying and eliminating hazards at their work. Learning more and then teaching the course, I was hooked. Later I

went back to grad school for my MPH and then directed the H&S program at UE. After that, constant learning, constant struggle, constant joy in my work.

Frank Mirer. Former United Automobile Workers and Hunter. "Doing Well by Being Left: Occupational Health in Service of the Union Movement"

My life goals in 1966 were to teach in a university and do politics alongside my career. Chemistry was incidental, and graduate school was a way to keep me out Vietnam and paying my fellowship. But the New Left approach to science, crystallized by SftP, lead me to develop competence in toxicology to support opposition to chemical warfare in Vietnam, and also support campaigns for worker health and safety. That preserved my sanity in graduate school, and then lead to a staff job at the UAW. I took my role to be convincing leadership and rank and file of solutions, not pulling rank based on education, telling them what to do. Those few progressive scientists made credible by employment in union and environmental organizations start early facing off against the top of the house in management and government, and eventually become leaders in the field. We will illustrate these claims with stories of campaigns.

DC Metro Science for the People: Continuing our Legacy in the 21st Century! | Organizer: David Schwartzman | Room: Campus Center 905

Introduction: DC Metro Science for the People has been active since 2005. Our organization includes researchers, engineers, teachers, students, service providers and community members engaged in analyzing, teaching and applying basic scientific principles for the common good. We focus on how scientific discoveries are made and utilized by our society: Who benefits? Who does not, and why? In this panel we will discuss our history and present a survey of our group and members' activities and research. Reading List: www.dcmetroSFTP.org, www.solarUtopia.org, www.redandgreen.org

Science classes in the summer school program at Bancroft Elementary School. Our projects included setting up and maintaining a worm farm for the Bancroft Garden and for community gardens in Mt. Pleasant. We also monitored pollution in various parts of Mt. Pleasant using a pollution measuring device, and looking at the growth of lichen in our neighborhood as an indication of pollution. We had a mock student council hearing, which included a debate and vote on some proposed laws. We also invited local leaders to share their experiences about how laws are passed by lawmakers in our city.

Our Criminal Justice Project was instituted to learn and share with concerned residents of the community what a person's rights are when accused of drug related activities (possession...), whether, when and how to challenge the validity of the evidence of illegal drugs.

Street Theater: Dr. Strangelove Sequel (when Edward Teller was speaking at the Watergate).

Films in local parks, public places (e.g., "Flow," "Heir to an Execution")

Forum with students at Howard University on "Air Pollution and Asthma in DC"

Roundtable at Catholic University (DC Social Forum) concerning DC's mandatory HPV vaccine.

Jane Zara. Nat'l Lawyers Guild, DC Statehood Green Party, DC Metro Science for the People. "Our DC Metro SFTP History; How to Combat the Expropriation, Appropriation and Privatization of Biological Resources"

This talk will include a brief overview of various instruments used for expropriation, appropriation and privatization of biological resources, including how national and multi-national corporations have had undue influence on international instruments, national and municipal legislation and regulation.

Joanne Fleming. Student at the University of the District of Columbia, Health-Care Worker, Human Rights/Peace Activist, DC Metro Science for the People. "Links between Science and Community Activism in the Struggle to Save McMillan Park"

I will discuss the links between science and community activism in describing a local struggle to save McMillan Park, which is an historic landmark in the District of Columbia. Its sand filtration site was the first water treatment facility in DC, operating from 1905 to 1986, providing pure drinking water without chemicals. The grounds were used by residents for recreational and sleeping purposes owing to the cool breezes during hot summers. McMillan Park was the first racially integrated park in DC. In spite of all this history still preserved in the filtration silos and underground tunnels, DC government is now planning to destroy this historic site with an economic development plan that would replace it with office buildings and luxury housing. These plans have been vigorously opposed by the surrounding community for several decades. Now there are several detailed proposals for truly green development, preserving the history and enhancing it with a variety of services to the community. Local groups including Ecolocity and Empower DC, which included some of the members of DC Metro Science for the People, have been involved in this struggle. For more information: <http://friendsofmcmillan.org/>

John Tharakan. Professor of Engineering, Howard University, DC Metro Science for the People. "Appropriate Technology and Social Justice: What can get us where?"

This presentation will focus on appropriate technology (AT) and it's intersection with the goal of social justice. We will discuss the concepts of Appropriate Technology, what it means in terms of technology and our goal of a just global social order. Social justice will be defined using a survival ethics framework for community flourishing and well being. Despite vast advances in technology, there remain significant portions of the population of our planet, that lack access to such basic needs as clean air and water, shelter, sanitary and safe environments, education, healthcare, information and communication services that the average citizen of a developed nation takes for granted as basic and fundamental in terms of his or her human rights. The drive to realize social justice would be when we could say that for all humans on this planet, that those basic foundational needs had been met. We are far from there. We are at a place where we need to continue to question and interrogate technology, to question its suitability to address the enormous number and variety of pressing human needs across borders and communities that leave so many in poverty, eking out a living on less than a couple of dollars a day. Our goal must be a conceptualization of technology as appropriate only if it empowers communities those technologies impact. Our technology education, research, and development, must reflect the paradigm of appropriate technology rooted in the understanding that technology rights for all humans are as critical as other basic rights, including civil and human rights. <http://www.appropriatetech.net>.

5:00 – 6:30 p.m. Keynote Lecture | Room: Thompson 102

John Vandermeer. Asa Gray Distinguished University Professor of Ecology and Evolutionary Biology, University of Michigan, SftP member. “Mentoring Comrades: The Dialectics of Political Mentoring in the Natural Sciences.”

Beginning with some personal reflections, this essay begins with the origin of many of our activities in opposition to the war in Vietnam. Structuring the organization in subgroups associated with various themes resulted in ongoing activities that lasted long after the organization formally retreated. One of those groups emerged from the food and agriculture subgroups initially located in Ann Arbor and Chicago, and became known as the New World Agriculture and Ecology Group (NWAEG) which remains active today, and boasts a history of opposing industrial agriculture both in the US and abroad. The organization reflects a coherence of the positions taken by Science for the People, from its inception as a subgroup to its current status as a series of people and institutions loosely connected in time and space but united by the principle that science is not politically neutral and that any science undertaken with an indifference to human suffering is immoral.

7:00-8:30 p.m. Dinner (buy tickets on Registration site), Amherst Room, Campus Center 10th Floor

8:00-11:00 p.m. Entertainment in the Cape Cod Lounge. Music by Sara and the Sagamore James Band; Spoken word by Walnut the Lyrical Genie, hip hop poet; and Papel Machete, puppetry with a message, a project of AgitArte

SUNDAY, APRIL 13**9:00-10:30 a.m. 4 concurrent panels****SftP in the World | Organizers: Sigrid Schmalzer and Minna Barrett | Room: Campus Center 903**

Ivette Perfecto. Professor of Ecology, University of Michigan, SftP member. “New World Agriculture and Ecology Group in Nicaragua: The Sandinista Years”

In this talk I will reflect on the participation of the New World Agriculture and Ecology Group (NWAEG) in Nicaragua during the Sandinista period in the 1980s. NWAEG was born from Science for the People in the 1970s and consisted primarily of biologists, mostly ecologists, interested in issues of food and agriculture. After the triumph of the FSLN against the Somoza dictatorship, NWAEG established a collaboration program with the Sandinista government, with a main focus on agriculture. Dozens of students and professors went to live, do research and teach in Nicaragua in solidarity with the Sandinista revolution. In my talk I will discuss the projects that were developed and the discussions and analyses that emerged from that experience.

Minna Barrett. Professor of Psychology, SUNY Old Westbury, SftP member. “SftP and China”

In 1973, a group of ten national activists working with different groups of Science for the People and subsidiary groups were invited to the People’s Republic of China as official guests of the Chinese

Academy of Science (Academia Sinica) and were hosted by their revered scientist, Zhou Pei-yuan, a theoretical physicist who was trained in the US at Cal Tech and Princeton (Einstein) and Leipzig, Germany. The group of ten, selected for their activism in popularization of science, the antiwar movement, and in challenging the economic and political influences of science in the US, came from a range of academic and applied settings and went to China to investigate rumors and documented data, that the Chinese were integrating a social consciousness into their production of scientific knowledge and their application of that knowledge to solving the technical problems that would liberate the vast majority of ordinary people in order to consolidate the benefits of their hard won socialist revolution. The visit lasted 28 days and introduced the group to a wide range of experiences in science institutes, universities, public schools, hospitals (medical and mental), people's clinics, factories, cultural venues and to the underlying ideological foundations of the Cultural Revolution. China, then and now, special projects led by regional planners in conjunction with peasants, architects and engineers, and photo representations of iconic images from China, then and now are included. You will learn why the Chinese claimed that in China: Science Walks on Two Legs and we will discuss if the revolutionary approach to bringing science to the people and the people to science has been maintained.

Dave Culver. American University, SftP member. "Science for Vietnam"

A SftP member from Chicago returned from a trip to Hanoi in January, 1971, and initiated the Science for Vietnam Project. The concept was to provide scientific and material aid, in the form of books, medical information, and other material, to the Vietnamese. This allowed progressive scientists and engineers to express, not only their opposition to the war, but also to work on constructive programs as progressive scientists and engineers. Conferences were held in the spring of 1971 in Ann Arbor, Chicago, and Boston. Science for Vietnam groups were active in Madison, St. Paul, Evanston, Ill., St. Louis, Chicago, Ann Arbor, and Boston.

Dianne Rocheleau, Professor, Geography, Clark University. "Solidarity with Indigenous People and Peasants Resisting Eviction"

Indigenous and peasant communities across the planet are under threat from a series of developments shrouded in the Fog of Greening and tales of the End of Poverty. The former includes: REDD, Reserves, Green Grabbing (land), and the "greening" of Industrial Agriculture 2.0. This is complemented by the selling of the Mining/Energy Boom as an anti-poverty machine. Both phenomena cut across lines of nominally socialist and capitalist economies and the usual "North-West/South-East" divides, though the processes and consequences are distinct in each case. This situation calls for a new proliferation of Science by/with/for people and the living world, in solidarity with social movements, networks, and nodes of solidarity-based innovations to counter current trajectories of sustainable development. Indigenous peoples and new decolonial movements from the Tar Sands of Alberta to the forests of the Amazon, the Andes Mountains and the plains of East Africa are calling out for new coalitions of sciences to help foster (and/or protect) socially just, economically robust and biologically viable ecologies. Examples of emerging solidarity science networks provide a glimpse of a new wave of science for the people and the planet.

Climate change and energy technology and policy | Organizer: Brian Tokar | Room: Cape Cod Lounge

Climate and energy policy continues to be a terrain of contested science, despite the near-total consensus around the reality of human-caused climate disruptions. In addition to continuing scientific debates in such areas as climate sensitivity to rising CO2 and attribution of extreme weather events, public officials tend to be highly selective in their uses of scientific data. Powerful

interests tend to succeed in playing down fossil fuel impacts, particularly around the increased use of natural gas, and in advancing discredited “false solutions” such as geoengineering and large-scale carbon sequestration. Additionally, projections for the potential to replace fossil fuels with renewable energy vary widely, depending largely on the analyst’s economic and political assumptions, rather than any inherent technological limitations. This panel will attempt to unpack these complex and interrelated discussions and consider how a renewed radical science movement may help move the debates forward.

Brian Tokar. University of Vermont & Institute for Social Ecology. “The Politics of Climate and Energy: Past and Present”

From the 1970s to the present, critical analysis of energy policies and politics have spawned epochal policy debates and inspired both progressive and radical social movements. We will examine some of these developments, including the involvement of Science for the People in ‘70s-era activism, current debates around climate science and energy alternatives, as well as the emergence of recent direct action campaigns challenging the expansion of fossil fuel infrastructure. The discussion will seek common threads and address the role of counter-systemic critiques in both past and present movements.

David Schwartzman. Professor of Biology (Emeritus), Howard University. “Prospect of a bottom-up solar revolution igniting an ecosocialist transition”

Between 2015 and 2020, large-scale implementation of high-efficiency thin film photovoltaics, low-cost capture of ocean currents, and high-elevation tapping of wind energy begins to rapidly decarbonize global energy supplies, radically undermining the Military Industrial Complex (MIC) because of the growing availability of very low-cost clean energy, which requires virtually no rare strategic metals. Corporate-instigated attempts to block this rapid process of solarization are undermined by decentralized grassroots initiatives around the globe. Massive civil disobedience and resistance within the armed forces and police prevent any effective repression of a now global peace and justice movement fighting for survival in the continuing Global Slump. As a result, public support for the MIC plunges, governments are elected around the world, including in the United States, with anti-capitalist agendas, promising a 21st century ecosocialist transition to Solar Communism. The dreams of Marx and W. Warren Wagar are realized, in spite of the fact that in 2013 few anticipated this could ever happen in our lifetime. I will make the case that this science fiction scenario is not delusional, rather a distinct possibility for which we should be prepared to make real.

Rachel Smolker. Biofuelwatch & Energy Justice Network. “Bioenergy: politics, bad math and carbon obsession trumps science”

Fossil fuels have come under increasing scrutiny as concerns about climate change, peak oil and energy security mount. Rather than encouraging deep structural changes needed to drastically reduce energy consumption, the dialogue has turned almost entirely around finding alternative energy sources. Bioenergy is one of the primary “alternatives” offered up, for a variety of technical and political reasons. This continues in spite of clear and mounting evidence that, for example, corn ethanol is driving up food costs and destroying biodiversity, while also failing to reduce GHG emissions, or that burning trees for electricity emits even more CO₂ into the atmosphere than does coal (per unit of energy generated) while contributing to deforestation and air pollution. While the facts speak for themselves, politics trump science and progress is hindered even further by an obsessive focus on accounting methods for measuring the flow of carbon molecules. This obsession with carbon counting appears to stem from a deep seated psychological insecurity that seeks solace in a reductionist world view that implies

“controllability”. Embrace of unpredictability, complex interdependences, unknown or unknowable variables, or other holistic perspectives that imply lack of human control, are increasingly endangered. Michael Dorsey, Professor of Environment Studies Program, Wesleyan University. “The legacy & arc of climate justice”

Women and Science | Organizer: Donna Riley | Room: Campus Center 911-915

Banu Subramaniam. Professor of Women, Gender, Sexuality Studies, UMass Amherst. “The Emperor’s New Clothes: Rethinking the Question of Women in the Sciences”

The question of the homogeneity of the practitioners of science was central to questions of women in the sciences. Science For the People was active in asking who was included and excluded within science, as well as why and how to develop a more inclusive science. Since those times, these questions have continued to haunt science and its practice. However, questions of scientific practitioners has become divorced from questions of knowledge production. Here, I trace the developments in the field since the early work in Science for the People.

Angela Willey. Professor of Women, Gender, Sexuality Studies, UMass Amherst. “Science Activism in the Lesbian Feminist Archives: Lessons for a Queer Feminist Science Studies”

Like others on this panel, my paper endeavors to bring questions surrounding feminist epistemology and the politics of scientific knowledge production into conversation with questions of representation among scientists. I do this here through reflections on an archival encounter with science activism, including issues of Science for the People, in the Lesbian Herstory Archive (LHA) in Brooklyn, NY. I explore the contents of the “science” file at LHA, which brings together surprisingly diverse approaches to understanding, resisting, and doing science, as a resource for a queer feminist science studies. Drawing from the insights of feminist and queer theories and from new materialist approaches, rather than traditions of science activism, queer feminist science studies might cull new resources for addressing questions concerning the embodiment of knowers by reading our lesbian herstory.

Amy Slaton. Professor of History and Politics, Drexel University. “Gender at the Bench: High-Tech Labor and Identity in a Neoliberal Era”

The difficulty of speaking openly about distributions of power in American workplaces is compounded in places of “high-tech” labor. Here, deployments of cutting-edge, science-based knowledge are seen to transcend utterly any issues of worker identity, opportunity or discrimination. To reflect upon or critique notions of gender, race, age, sexuality or physical ability is to delay or corrupt technical production. This paper considers the history of these notions in American industry and their distressingly effective reassertion in emergent neo-liberal ideas regarding citizenship and intellectual capacity.

Donna Riley. Professor of Engineering, Smith College. “Persisting and Resisting: SftP’s legacy for feminist engagement with Science”

The feminist voices within Science for the People generated analyses of both women and gender in science with a depth and breadth that was in many ways ahead of its time. This talk explores the legacy of two of SftP’s feminists, Rita Arditti and Ruth Hubbard, each of whom went beyond the conventional liberal feminist perspectives on women in science that continue to dominate the conversation today. They shifted focus from numerical representation and individual achievement of women in science to systemic issues including critiques of sexism in scientific theory, the gendered, raced, and classed politics

of scientific practice, and working conditions in scientific institutions. In this work that strongly and consistently connected gender and other social justice issues, we can trace the roots of current scholarship in feminist science and technology studies and identify with gratitude the legacy of Science for the People.

Health, medicine, pro- and anti-people healthcare models | Organizer: Robert Shapiro | Room: Campus Center 905

Martha Livingston. Professor of Public Health, SUNY Old Westbury. "The Health Left and SftP's Legacy, 40 Years On"

Science for the People worked to organize the opposition to biological determinism; visited China when few Americans had had the opportunity to do so, reporting to a U.S. audience on the scientific achievements of a socialist society; and more widely examined major issues of the day from a dialectical materialist perspective, educating generations of students not only on the particular issues but in how to think about them. The left in general, and the health left in particular, have been active in continuing the anti-biological determinism work ever since, responding to every new iteration of racist pseudo-science, from the Bell Curve in the 1990s to today's new round of "genomic science." Other struggles include the battle against climate change denialism and the incessant defense of environmental protection and workers' health and safety and women's hard-won reproductive rights; and the struggle not only for a rational national health insurance system, but for health and health-care justice. SftP's work has provided an intellectual toolbox for left activists in defensive battles, but more importantly equips us with a positive, expansive vision of the possibility of using science in service of a more just society and planet.

Arlene Ash. Professor of Quantitative Health Sciences, UMass Medical School, Worcester, SftP member. "Better, Cheaper Health Care: Can Technocrats Help?"

How can a society best use its resources to improve people's health? Although spending on health care is only one piece of the puzzle, there are technical as well as political challenges to knowing how to get good value for money spent on health care. I will discuss key problems in how to measure and encourage quality and value that any society must address whether it has a coherent single payer system or not.

Mandi Smallhorne. South Africa Science Journalists Association. "Health and the Marketplace of Ideas"

Health science and health care are extremely complex areas which have come under increasing and distorting pressure from interested parties. Corporations, government and government agencies and other stakeholders have both the power and the funds to influence both what research is done and how it is communicated. At the same time, the rise of social media and online channels of communication has meant the lay public are also pummelled with ideas provided by bloggers and citizen journalists and outright cranks. How should an ethical health science journalist negotiate these pitfalls to ensure that the people receive quality information about health science that enables them to make decisions about their health which are truly informed?

Martha Herbert. Neurologist, Mass General and Harvard Medical School. "Transforming Autism Science and Standards of Care Through Crowd-Sourcing Community Practices"

The reductionist construction of "autism" as a hopeless genetically caused lifelong disability obscures great complexity, environmental contributions and avenues of transformative intervention. While targeted pharmaceutical interventions largely fail and/or cause serious side effects, a diverse grass roots movement of families and clinicians sensitive to environment and multi-scale systems dynamics has pieced together health-promoting strategies that lead to great improvement in many and loss of the autism diagnosis in some. Such strategies are also being utilized for other chronic childhood (and adult) illnesses, many of which are also alarmingly on the rise. Many of these families are highly motivated due to perceiving that their child is "in there" rather than "broken;" supporting this perception is the growing number of individuals with autism who are learning to type and write even though they may not be able to physically produce speech, and demonstrating great creativity and intelligence. In essence this set of movements is setting up a parallel medical system to bypass the shortcomings of what has become of conventional medical care, in which decision-making is based on statistical conclusions from large-scale studies that lose sight of individuality and multifactorial problems (so-called "evidence-based medicine"). While physiology departments are shrinking, being absorbed into pharmacology departments, or closed, this movement is returning to the physiological grounding of medical practice. It is complicated to treat vulnerable patients who are now challenged by a stunning combination of toxic exposures and nutritional shortfalls, with resultant pervasive immune and metabolic dysfunction that no "magic bullet" can repair in any simple fashion; and research funding from most government and private sources does not support investigations into these challenges. Yet even with this complexity and lack of institutional support for systems oriented approaches, restoration of healthier homeostasis appears quite feasible in many cases. Emerging bioinformatics and testing resources may provide an opportunity to build an infrastructure to track this community-based science. We have an unprecedented opportunity to raise the level of understanding of what we are facing regarding the catastrophic impacts of industrial production and agricultural practices on health, and to upgrade the quality of care we are able to give to the vast numbers of walking wounded and chronically ill children and adults, and to demonstrate regeneration of resiliency in injured biological systems as a model for the regeneration of viable ways of living more broadly.

11:00 a.m. - 1:00 p.m. Closing Plenary: "SftP 2.0... Where do we go from here?" | Room: Thompson 102

The founding document for SCIENTISTS dedicated to vigorous SOCIAL and POLITICAL ACTION (precursor to SftP) announced the intent to establish a "forum where all concerned scientists — and especially students and younger members of the profession — may explore the questions, Why are we scientists? For whose benefit do we work? What is the full measure of our moral and social responsibility?" The panelists assembled here will offer a range of answers on these questions and will open a discussion of how young scientists today can imagine their futures as part of a progressive movement to build a science for the people. We expect to engage a wide range of experiences and views from the participants in the conference.

Vinton Thompson. President, Metropolitan College, SftP member.

Steve Nadel. Climate activist, SftP member.

Ivan Handler. Chief Technology Officer, Illinois Office of Health Information Technology, SftP member.

Ignacio Chapela. Professor of Environmental Science, University of California Berkeley.

Darshan Karwat. AAAS Fellow, U. S. Environmental Protection Agency.

Karoline Pershell. AAAS Fellow, Department of State, Foreign Service Institute.

1:00 p.m. on

Stick around to talk, document the history of the movement, and plan for the future. The conference rooms will be available all day: participants should feel free to use them for organizing.