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ESSAY

## The Revitalization of Science for the People

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**ABSTRACT:** Inspired by earlier generations of Marxist scientists, Science for the People (1969–1989) became synonymous with the radical science movement in the United States, which emphasized the class nature and ideology of knowledge production, and organized scientists toward anti-capitalist struggles. In 2015, the organization and publication were revitalized, under a very different sociopolitical context, by a new generation of science workers. What are the historical continuity and points of departure? What challenges were presented to the activists of the 1970s from which we can draw lessons to build our present movement? What have the radicals across generations achieved and what is left to be done? As workers in science, pupils in the science of science, and as organizers of Science for the People, we offer the necessary self-critique in order to refine the vision, strategy, and plans of action to collectively tackle the pressing issues in science and society of our time.

**KEYWORDS:** Radical science, science for the people, labor, science activism, new left, social relations of science, science-based social movements.

“Practice without thought is blind; thought without practice is empty.”  
—Kwame Nkrumah, *Consciencism* (1964)

### Introduction

J.D. Bernal’s 1952 pamphlet *Marx and Science* remains a seminal text for its union of historical materialism and the dialectics of nature into an all-encompassing philosophical worldview (Bernal 1952). Bernal, himself a biophysicist (before the term formally existed as a scientific discipline), was inspired by the advancement in the sciences as well as the philosophy of science in the Soviet Union. Together with other prominent radical scientists in Britain, they set in motion what amounted to an ideological scientific revolution in the West that is still relevant today (Sheehan 2022).

The last chapter of *Marx and Science* is titled: “The New Socialist World—Science for the People.” The latter half of the title took on a life of its own when

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a group of activist-scientists associated it with a US-based radical science organization and publication. First published in 1969, *Science for the People* magazine was the voice of the organization Scientists and Engineers for Social and Political Action (SESPA)<sup>1</sup>, which was reminiscent of Bernal's own World Federation of Scientific Workers founded a generation prior.

From 2015–2019, another generation of radical scientists revitalized the organization and publication. What sets both the original SftP and its recent revitalization apart from other efforts within the sphere of science and technology activism are its efforts to situate itself within a long lineage of radical science that can be traced back to Bernalism, and from there, to the scientific worldview of Marx and Engels. Despite the spatial and temporal separation from both the New Left of the 1970s and the Second World War era in which Bernal was writing, Marxist science, such as it exists in today's late imperialist era, has retained its essence and alignment with a dialectical materialist worldview. An engagement with the contradictions of world capitalism and their necessary entanglement with science remains fundamental to any radical critique of science; the philosophy of praxis requires intellectual development (theorization and publication) guided by action (movement and organization), and vice versa. Then as now, scientists as direct producers of knowledge are appealed to as active agents in political struggle.

At the same time, to understand and to win the struggles of today (i.e., engendering “the new socialist world” imagined by Bernal), we must consider some key differences between the two generations (Table 1). Before we can elaborate on SftP's present and future, we must first situate the organization within its historical contexts. Our unique contribution, perhaps, can be discerned from the fact that we do not approach this analysis as a purely academic endeavor, but as a self-critique and reflection offered by individuals involved in this organization, who are still navigating the many contradictions within the points of intersection between science and society.

### **SftP and the New Left**

As histories and legacies of Bernalism and the radical science movement of the 1930s and 1940s (Foster 2020; Ienna 2022), as well as the origins and activities of SftP (Moore 2008, Schmalzer et al. 2018) have been written elsewhere, we focus on comparing some aspects of the strategies and tactics of the SftP of the 1970s with its revitalization today, with a special attention to the differences between the macro-level political, economic, and historical contexts. In 1973, world capitalism entered an epochal crisis of overaccumulation and

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1. The acronym SESPA gradually dropped out of use in the early 1970s as many simply referred to the organization as SftP.

stagnation, just as the United States withdrew combat troops from Vietnam in the same year (Arrighi 1994, 300–317). The interpenetration of these two processes in the preceding decade produced the material conditions that contributed to SftP’s early formation. While the founding of SESPA traces back to attempts of conscientious physicists pushing the American Physical Society (APS) to oppose the US War in Vietnam (Moore 2009, 133), the organization’s rapid growth throughout the 1970s had as much to do with the structural change in science as with the social currents of progressivism within the broader culture of the United States.

**Table 1.** Comparison of SftP between the two generations:

	1970s	Today
Political philosophy	SRS, predominantly western Marxism	Influenced by feminist, Indigenous, decolonial scholarship; nascent engagement with ecological Marxism
Class position	Middle class, pivoting against careerism and promoting alternative career choices	Proletarianized student workers with high level of precarity, pivoting toward working-class identity
Tactic	Protest actions, personal confrontations, attempts at subversion, de novo campaigns	Coalition building, support roles for broader social movements, trade unionism
Organizational structure	Decentralized, held together with magazine participation, dominated by few large chapters	Moving away from decentralization as turnover has been too high to sustain local campaigns, resulting from magazine being dissociated from the organization
Organizing energy	Larger social current of anti-war, civil rights, women’s rights movements	No coherent radical social currents to latch onto, falling back to institutionalized spheres of political action
Organizing capacity	Organizers have more job security, better social welfare, and most members have access to existing political actions on-campus	Reduced capacity due to increased precarity, exacerbated by social fragmentation and digital alienation
Theories of change	No unified ideology, operated as a “big umbrella”	Centering political education and working on organization’s ideological foundation

The mid-1960s saw federal R&D in basic science dwindle for the first time since 1945. Counterposing the previously uninterrupted growth was the uninterrupted decline that was only to worsen in 1973–1974 (Rowberg 1998). What remained of state support for science during the years of escalation of the War in Vietnam was substituted by military-directed research. Not only did the further incursion of militarism into the ivory towers of universities heighten the preexisting tension among politically eclectic academics—who were no strangers to sporadic protests and agitation on campus—the shift in funding sources also meant that the research agendas became subjected to the heavy hands of the military. For those scientists who had been accustomed to the privileged sovereignty during their labor process, the imposed institutional constraints were intolerable. The SESPA founders of the APS stated that their goal of organizing was to “regain our full intellectual and political freedom” (Goldhaber et al. 1968).

Whereas the pivot to individual rights and responsibility was hardly in line with the radicalism of Bernal and colleagues, many who followed suit were rapidly radicalizing in ways that were more aligned with earlier visions of Marxist science. In contrast to the Union of Concerned Scientists, founded in the same year and arising from similar concerns about the weakening of scientists’ influence on public policy, SftP attracted the more radical contingents to its rank. Student activists schooled in the civil rights movement, women’s rights movement, and the antiwar movement began to apply an explicitly anti-capitalist lens to tackle the problems of race, gender, militarism, and their relationships to the production of scientific knowledge. In the December 1970 issue of SftP, the suggested reading list included, among others, Paul Baran and Paul Sweezy’s *Monopoly Capital*, Frantz Fanon’s *The Wretched of the Earth*, J.D. Bernal’s *The Social Function of Science*, as well as Karl Marx’s *Economic and Philosophic Manuscript of 1844* (Contreas et al. 1970).

Throughout the 1970s, SftP became associated with “confrontational, uncompromising, and insistent” direct action that included “disruptive tactics such as sit-ins, the appropriation of public and private spaces for political purposes, refusals to leave, vigils and street parties” which “went well beyond the neutral distribution of scientific information, cool logical argument, and gentle moral discourse” (Moore 2008, 164–165). Armed with class analyses and a willingness to subvert professional norms and embrace confrontation, SftP spearheaded critiques of establishment science, the false pretense of scientific neutrality, and oppressive ideologies, while seeking alternatives to the hegemonic mode of knowledge production.

Yet, despite Marx’s looming presence in the publication, the organization remained a big umbrella that was open to self-identified Maoists and liberals alike. SftP remained diverse and decentralized, driven by regional chapters,

working groups, and individuals, with no formal set of governing principles uniting the organization (Moore 2008, 158). Throughout 1974–1976, SftP chapters in the Northeast gathered to work on creating a set of “Principles of Unity” that could guide the organization’s actions. At these conferences, a group emerged which called itself the “Unity Caucus,” and pushed for more working-class leadership within the organization. Some members resisted the suggestion to adopt words like “anti-imperialism,” “working class leadership,” or “self-criticism” (Greeley and Tafler 1979); even the suggestion to specifically mention capitalism proved controversial (Moore 2008, 182). Despite long and laborious discussions, the Northeast chapters did not arrive at any Principles of Unity.<sup>2</sup> The failure of the Unity Caucus’s proposal evoked a constant fear of “cleavage”—though perhaps somewhat ironically, the Unity Caucus themselves left the organization *en masse* soon afterward—which precluded deeper political discussion and ultimately hindered the organization’s effectiveness.

The elevation of decentralization, loose-knit ties, and diverse priorities over a formalized leadership structure and codified principles is not unique to SftP; and the weakening of SftP in the mid-1970s cannot be analyzed in isolation from the broader historical trajectory of the New Left. The end of the first iteration of SftP came about in 1990, owing partly to financial difficulties and tax troubles, and in part due to growing discontentment among some members within the organization, particularly in regard to the deprioritization of issues related to gender and race (Schmalzer et al. 2018, 5; Moore 2008, 183–184). However, in terms of organizational capacity and impact on radical science, SftP was already long past its peak of the mid-1970s. There are many factors which play into the decline of any activist group or movement, and we do not claim to have identified or isolated the primary cause for the decline of SftP. Here, we attempt to briefly highlight a few structural and ideological elements that may have contributed to the demise of the previous generation. The subsequent sections will further consolidate these points as we lay out the visions and strategies for the revitalized SftP as discussed in the magazine’s chapter reports.

### Positionality, Tactic, and Philosophy

The strongest critique of establishment science offered by SftP revolved around two recurring themes that reverberate to this day: “scientists are

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2. According to the political sociologist Kelly Moore (2008, 182): “many academic members were uncomfortable with the Caucus’s desire for working-class leadership of the group. Others found the Unity Caucus’s methods heavy-handed and still others were disappointed that their own views were not considered.”

workers” and “science is not neutral.” The former positions the organization as agents in class struggle, and the latter presents an ideological challenge to the forces of alienation and to the conventional framing of the role of science under capitalism. However, while SftP explicitly supported proletarian causes, its members largely fell short of identifying themselves as proletarian. Among the chief theorists through which SftP members engaged with the question of class was the leading New Left thinker André Gorz, who at the time was forming his famed thesis *Farewell to the Working Class* (1980) that dubiously steered Western intellectuals away from centering the revolutionary proletariat. As such, SftP’s professed class analyses never went beyond investigating the formal differences between scientists and technical professionals vis-a-vis what they called “blue collar workers” (Schevitz et al. 1973). While they strived to emphasize commonality and unity between the “strata of workers,” it is the inquiry into the real separation between different strata of workers, through the concrete relations of production, that was sorely missed.

This separation is ultimately rooted in the concrete socioeconomic status of scientists and engineers of the early 1970s. A 1974 census shows that scientists and engineers with doctoral degrees had an income differential of almost doubling the national median salary: \$23,100 vs. \$12,840 (United States Census Bureau 1975). The unemployment rate for the former was also at a low 1.5 percent compared to 6 percent for the total workforce. The privileged socioeconomic status, of course, did not apply to the 5 percent super-minority of women and even fewer non-white scientists and engineers (Crowley 1972).<sup>3</sup> Thus, the white, male, and middle-class composition of much academic work during the 1970s and 1980s may have materially hindered class consciousness. While some SftP members and chapters participated in community-based research and provided assistance and aid through work alongside other groups like Health/Pac, the Black Panthers, and the Medical Community for Human Rights, and the organization as a whole was in principle opposed to inequality in various forms, there was a latent epistemological tension between their position as technical experts and their commitment to a more radical vision of science by the people, or science in a citizen-shaped world (Moore 2008, 159–160; 180–181).<sup>4</sup>

If not economic conditions generating worker alienation, what was sustaining the energy behind the organization? The antiwar movement was in-

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3. Many within SftP recognized the difficulties of centering issues of race and gender in the organization (Moore 2008, 184).

4. As Kelly Moore (2008, 159) writes, “SftP, like many other professional-based, anticapitalist organizations from that era, never collectively resolved the problem of how best to assist the working class without resorting to the use of expertise.”

deed the spark that effectively mobilized and radicalized students and academics in the sciences. But the growth of *Science for the People* magazine into 1,800 subscribers and 4,000 in circulation—the Boston chapter, for example, touted membership of up to one thousand—had everything to do with the high-profile confrontation with the American Association for the Advancement of Science (AAAS) (Moore 2009, 19). In 1970–1972, AAAS annual meetings became SftP’s arena for political agitation; reactionary research agendas were targeted, and presentations disrupted with banners, attracting nationwide spotlight by the *New York Times* and *Science* (Lyons 1971; Gillette 1973). It is worth noting that in 1976, AAAS incorporated SftP agendas into the meeting program, which accelerated the fracture within the organization along different theories of change: those who distrusted the establishment and those who sought changes within the system. Beyond national conferences, direct action also included public shaming of individual scientists. The Berkeley chapter’s scuffle with eminent physicists who work for Jason was a prime example (Berkeley SESPA 1972).<sup>5</sup>

After the initial spikes in membership, coordinated disruptive tactics became less common in the latter half of the 1970s. It is entirely possible that the presence of FBI informants within the organization—revealed in the FOIA-requested file dated December 1972—had played a role in dampening the energy for direct action. What attracted the attention of the state apparatus, besides disruption at scientific conferences, was SftP’s internationalism. In the summer of 1972, SftP established contact with the Chinese Embassy and began organizing a delegation to visit the People’s Republic of China in the subsequent year. At the same time, the Chicago chapter formed a subgroup Science for Vietnam, which collected nine information packets to be sent to the North Vietnamese authority (Federal Bureau of Investigation 1972). These two activities were the most subversive during the New Left era SftP. Yet, whether they materially contributed toward the goal for international scientific collaboration or enacting socialist scientific practice remain a topic of debate. Reading the trip report, *China: Science Walks on Two Legs* (1974), we cannot but sense a romanticist naivete at best and lingering white gaze at worst (Altendorf et al. 1974). It remains unknown whether the packets of scientific journals, political pamphlets, and school textbooks that Science for Vietnam collected, and which were detailed in the FBI documents actually reached Hanoi, as no records of any subsequent contacts with North Vietnam were found.

During this period, SftP’s organizing activity was widespread but eclectic, directed by different chapters consisting of individuals of different political

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5. Jason is a Pentagon-affiliated think tank, consisting of prominent physicists, many of whom were Nobel Laureates.

leanings. Critiques of establishment science thus ranged widely from individual scientists' morality to political economy and ideology. It is not an exaggeration to state that there was no coherent philosophy of science for the organization or the publication. The Marxist contingents in SftP, with few exceptions, were heavily influenced by social constructivism of the Frankfurt School. The questions they raised on the social relations of science were crucial; the answers, however, were nearly always ones that condemn instrumental rationality. As such, some admitted in writing that "nobody could conceive of a Marxist method" for natural science (Meertens and Nieman 1979). Such a poverty of philosophy not only precluded developing real alternatives to the subject of their critique—despite the wish to find salvation in Mao-era China—it rendered this version of radical science ill-equipped amidst the Science Wars and the subsequent dismissal of any critical engagements with the socio-political nature of the production of scientific knowledge as mere post-modern relativism (Sheehan 2022). What can we build on, and what is to be redone, for radical science to adequately address the pressing issues of today, a time of unprecedented crises?

### **The March Toward Revitalization**

Over two decades since the initial dissolution of the organization, the presence of SftP has resurfaced once again. The spark this time, distinct from the anti-war outrage that first gave birth to SftP, was the growing reactionary political milieu that swept outwardly fascistic personalities into office, their anti-scientific irrationalism, in tandem with the feeble resistance offered by the liberal scientific establishment. The "March for Science" of 2017, attended by many who were unsettled by the election of Donald Trump alongside the intensification of the climate crisis, pushed a record number of scientists to poke their heads out of the ivory tower. Whereas the March raised important issues of climate justice and science education, it also spewed liberal myths of "science-based policy" or "nonpartisan" [read: neutral] science (Sneed 2017). The AAAS, thirty years ago a target of SftP's protests, itself turned to protest as it organized the "Rally to Stand Up for Science." It is in this context that some saw the necessity to revitalize SftP and to transcend the contradiction of liberal and reactionary views of science to a higher plane.

The initial phase of rebuilding SftP rode on the rising tide of anti-Trump sentiment; the organization leaned into using the label "progressives," attracting many who broadly and amorphously identified with the left. A close tie with the Union of Concerned Scientists—a liberal organization born the same year as and rejected by SftP in 1969—had also been entertained. Organizationally, SftP attempted to replicate the decentralized model of the 1970s,



which—during a period of high energy from 2017–2019—spawned eleven chapters and half a dozen working groups across the United States.<sup>6</sup> When the COVID-19 pandemic hit in February 2020, organizing activity did not immediately cease, as many campaigns shifted to remote settings. However, at the time of writing in April 2023, SftP has dwindled to four local chapters and two working groups.

In 2018, the magazine *Science for the People* was republished. Early in 2020, the publication was designed around themes and issues concerning SftP’s various working groups and campaigns. But as the organizing capacity decreased and working groups dissolved, the magazine became more dissociated from the broader organization. Attempts to integrate the central Steering Committee and the editorial collectives have not been forthcoming. Nevertheless, SftP magazine has grown from 200 to 600 in circulation, a sizable increase, but a fraction of the circulation of the original magazine at its peak. The contents—curated by individual editors independent of the Steering Committee—generated a readership beyond SftP but have also raised concerns about the widening gap between action and theory.

### Principles of Unity, 2018

At the first national SftP convention held in Ann Arbor in 2018, the aims of the revitalized SftP were laid out in four internal “living documents” which attempt to codify the organization’s guiding principles, codes of conduct, decision-making processes, and policies (SftP Steering Committee 2018). Among these documents, the “Principles of Unity and Bylaws” (POU) sketches a vision of SftP as a “science-activist organization dedicated to building a radical political movement in science and society,” through which SftP members in national or local chapters should use “bottom-up strategies to build a science-activist organization” characterized by its commitment to twelve core values. The POU span from broader imperatives to “oppose all forms of oppression, exploitation and marginalization, while recognizing the role of science in these conditions” to more concrete objectives to “organize labor in the scientific workforce” and to conduct “radical, politically and scientifically informed investigation into problems of science and society” (Table 2). The early creation of the POU presents a contrast to the original SftP’s challenges in coming to agreement about formalized codified principles.

One core guiding principle for the revitalized SftP has been the development of strategies for enlisting scientists in the service of anticapitalist knowledge production, emphasizing the importance of outreach, organizing, and recruitment. In the Chapter Reports published in the early issues of the

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6. International chapters of SftP such as Canada and Southern Africa formed later in 2022.

revived magazine, local SftP chapters describe how they formed around the time of the 2017 March for Science protests.

**Table 2.** Revitalized SftP's Principles of Unity (as of April 2023):

1	Opposes all forms of oppression, exploitation and marginalization, while recognizing the role of science in these conditions, and the responsibility of science in liberatory struggles against all of these conditions
2	Builds parity within the organization for marginalized, oppressed, and exploited peoples
3	Works to organize labor in the scientific workforce
4	Conducts radical, politically and scientifically informed investigation into problems of science and society
5	Promotes positive instances of the use of scientific and technical expertise, providing scientists with knowledge and opportunities to use their specific training in accordance with SftP principles
6	Resists the use of science for exploitation, oppression, capitalism, imperialism, war, and environmental destruction
7	Struggles for system change to address the root causes of social, economic, and ecological problems
8	Affirms a deep respect for all life in the motivation for and practice of science
9	Opposes the assumption that humans have the right to exert violence upon, exploit, and control other humans, non-human animals, and nature
10	Recognizes scientific knowledge outside of establishment institutions
11	Recognizes, supports, and encourages the role of scientific knowledge and scientific investigation in building equitable futures, increasing understandings of our world, and guiding public policy
12	Fights the corruption of science by systems of power and builds democratic forms to expand access to scientific tools and knowledge

These reports describe how members sought to capture the attention of those scientists who had become politicized in response to the attacks on science and evidence-based policy from the political right of the Trump era. During the March for Science protests, local SftP chapters worked toward radicalizing scientists by creating forums for discussion and political education. At the same time, chapters were not entirely antagonistic toward the March for Science, and some helped to co-organize or coordinate local events related to the

march. Strategies included teach-ins, town halls, and reading groups, which attempted to cultivate and disseminate deeper structural analyses of the political economic problems facing science than were present in the dominant framings of the march.

The East Tennessee SftP chapter, which helped coordinate the March for Science in 2017, worked toward “steering the message of the march toward a distinctly radical tone—advocating the necessity of system change to address climate change, lifting up the struggles of marginalized and oppressed people within science, and promoting these struggles above banal ‘science advocacy’” (Chapter Reports 2019). Chapter members drew from their previous experiences with labor and environmental movements and hosted regular meetings which discussed organizing practices and tactics for engaging with local issues and organizations. These meetings also provided platforms for scientists to share their own personal experiences with working in a field that actively discourages political organizing, and working with faculty members or supervisors who may have been hostile towards efforts to make visible the latent politics of science. In a chapter report from spring 2019, one East Tennessee SftP member reflects that:

A common theme in sharing our experiences in the sciences was how institutionally repressed we were from both engaging in political activism and coming to understand science in political terms. Our meetings became a space where we shared our knowledge and skills with one another and introduced each other to concepts familiar to political organizers but less so to scientists while discussing how we could put this knowledge to practical use. When sharing our memories of the past year, many of our members felt strongly that this was one of the more useful aspects of our meetings. (Chapter Reports 2019)

Similarly, the reports from the Boston chapter of SftP describe how they hosted twice-monthly meetings which featured discussions on topics ranging from biological determinism, the politics of genetic engineering, the politics of artificial intelligence, the increasing role of the private sector in science, dynamics of gender/race/caste in science, and the lessons that leftists should draw from the history of Lysenkoism. These meetings tried to create linkages and continuity with the first iteration of SftP, hosting presentations from members of the original organization (Chapter Reports 2019). In 2019, the University of Maryland College Park chapter also formed reading groups and discussion groups as a strategy for uniting and solidifying ties among radical scientists at “America’s most militarized university,” centering issues related to the science of sex and gender, transgender rights, climate change, and expertise and democracy. The chapter report describes how reading groups provided a foundation upon which the group-built connections with other activist

groups, including socialists, environmentalists, and anti-prison activists (Chapter Reports 2019).

Reading groups and discussion groups have been a prominent mechanism for SftP chapters to deepen members' understandings of, and commitments to, radical science. While some of these discussion groups focus on broader concepts and principles that work toward enriching the political consciousness of scientists, others have been framed more specifically around local issues. For example, in response to the Atlanta city council's 2017 resolution to shift to clean energy, the Atlanta SftP chapter organized monthly reading group sessions to construct a theoretical foundation from which they could be better positioned to advocate for equitable transitions. One outcome of the reading group was the facilitation of a "Green New Deal" town hall in Gwinnett County, Georgia, which integrated a discussion of immigrant rights into a broader conversation about energy efficiency and renewables. In collaboration with the Metro Atlanta Democratic Socialists of America's Ecosocialism Working Group, the Atlanta chapter of SftP also developed an organizing guide to share lessons and experiences that could help other chapters or groups organize similar town halls on local issues related to climate and energy justice (Chapter Reports 2019).

While discussion groups, reading groups, and seminars are the strategies for radicalizing scientists that come up most frequently in the chapter reports published in the magazine, there are also some examples of more confrontational approaches that hint at some of the antagonistic and disruptive tactics that the original SftP was known for. For instance, the Santa Cruz chapter discussed efforts and strategies for "counter-recruiting" efforts at the University of California Santa Cruz (UCSC) job fairs (Chapter Reports 2020a). Recognizing that UCSC has close entanglements with Silicon Valley firms and military defense contractors, counter-recruiting efforts produce agitprop material which detail the links between the Big Tech companies, the Pentagon, and the Department of Homeland Security.

In Ann Arbor, SftP chapter members were involved with "researching and exposing the University of Michigan's complicity in the climate crisis and advocating for the implementation of an ambitious and just climate policy," publicizing the university's \$1.5 billion worth of investments in fossil fuel companies and raising awareness about how some of these investments have provided funding for far-right groups (Chapter Reports 2020b; Chapter Reports 2019). The research findings were shared with local activists who have been agitating for fossil fuel divestment; for more equitable distribution of university funds and resources; for mechanisms to incorporate community input into the university investment process; and for greater accountability related

to the university's emissions inventory. SftP chapter members and other campus activists' groups successfully "pressure[d] the university to incorporate methane leakage into its emissions inventory," and into "acknowledging the science that shows that official emission factors for methane are grossly underestimated." Ann Arbor SftP members also worked on pressuring the University of Michigan to incorporate a course in the core curriculum of their School for Environment and Sustainability program that would focus on issues related to environmental justice, environmental ethics, and a critical analysis of conventional sustainability studies.

While radicalizing scientists and science students has been a primary focus of the revitalized SftP, local chapters also describe public outreach and education efforts. One of the principles of unity highlights an imperative to "fight the corruption of science by systems of power and build democratic forms to expand access to scientific tools and knowledge." Chapters have endeavored to build relationships with communities and groups outside of academic or scientific institutions and have organized or participated in protests and public campaigns related to local issues. Tactics related to public understanding of science have included public-facing events such as teach-ins, seminars, open panel discussions, book launches, and community engagement events. The Boston chapter facilitated webinars, panel discussions, and presentations related to energy democracy, the transformation of energy grids, as well as a town hall on the proposed creation of an electric substation which would significantly increase electricity use by industry in a residential neighborhood (Chapter Reports 2020b).

The East Tennessee chapter's work to support SftP's "People's Green New Deal" campaign involved organizing community discussions attended by roughly forty community members which sought local input about how a Green New Deal might help respond to their priorities and how a pathway to a decarbonized economy could map onto the specific issues facing Appalachian communities. In partnership with regional organizations like Appalachian Voices and Statewide Organizing for Community Empowerment (SOCM), the East Tennessee Chapter worked on a campaign to rewrite the Tennessee Valley Authority Act to center energy democracy and environmental justice, incorporating local input from a tour of "communities and cities that would be most impacted by a just transition away from fossil fuels to hear out their concerns" (Chapter Reports 2019).

Also in 2019, the Twin Cities (Minnesota) chapter of SftP worked on drafting material to inform legislation regarding a Green New Deal, working with youth networks and organizing a public workshop series "centered on storytelling as a transformative way of engaging science and scientists with social justice and multiple ways of knowing" (Chapter Reports 2019). The Western

Massachusetts chapter also initiated projects which were oriented toward educating youth about issues related to radical science. The chapter held a workshop for K-12 teachers called “Science and Social Justice,” which provided teachers with materials on a range of topics including environmental justice, community engagement, the integration of social science concepts into science education, and trauma-informed practices, as well as guidance on development curriculum plans (Chapter Reports 2019).

Another principle of unity is centered around SftP’s opposition to “the use of science for exploitation, oppression, capitalism, imperialism, war, and environmental destruction” and the need to advocate “for system change to address the root causes of social, economic, and ecological problems.” Local chapters have worked with other groups to co-organize strikes, rallies, demonstrations, and protests, particularly on issues related to environmental justice. In 2019, members of the Atlanta chapter showed up at a Senator’s office to confront his staff about the party’s opposition to the Green New Deal. The chapter also participated in public rallies and protests against Georgia’s Public Service Commission and Georgia Power, activism which they credit with possibly contributing towards the closure of five coal-fired power plants (Chapter Reports 2020b). In Boston, the chapter worked with a local community group in their fight against the construction of a natural gas compressor station, protesting at the construction site, submitting comments to regulatory agencies, and working alongside East Boston residents and local environmental justice groups in their clashes with the utility company Eversource over efforts to construct an electric substation in a flood zone (Chapter Reports 2020a). In response to the UCSC’s work on a planned Thirty Metre Telescope on top of Mauna Kea in Hawaii, members of the SftP chapter helped organize an event to pressure the university to withdraw their support for its construction, working with Native Hawaiian elders to speak of the site’s significance and for the importance of respect for sacred places (Chapter Reports 2020a).

One attribute that distinguishes SftP from other advocacy groups is that in addition to producing critiques of the production of scientific knowledge under capitalism, members of the organization also actively seek to apply their professional training and expertise to produce counter-hegemonic science, or to help address community-identified questions and concerns. This is reflected in POU statements which affirm that SftP “recognizes, supports, and encourages the role of scientific knowledge and scientific investigation in building equitable futures, increasing understandings of our world, and guiding public policy,” and “promotes positive instances of the use of scientific and technical expertise, providing scientists with knowledge and opportunities to use their specific training in accordance with SftP principles.”

In 2018, the East Tennessee chapter was approached by a local energy justice group regarding a hazardous waste permit application for a chemical plant located in a neighborhood in Knoxville Tennessee which is predominantly inhabited by working class people and people of color. The chapter requested that the Tennessee Department of Environment and Conservation (TDEC) host a public hearing regarding the permit, a request which they were legally required to fulfill. In preparation for the public hearing, SftP chapter members hosted a “research party” where they gathered information about the application permit, state and federal law, and the history of the chemical company (Chapter Reports 2019). The chapter then produced a “community briefing document” which they distributed to community members, so that they would be informed in advance about the issues discussed at the hearing and could ask questions and make comments. The chapter report states that the public hearing provided SftP members with an opportunity to leverage their professional training as well as their reputation as scientists to navigate the regulatory system and put additional pressure on the chemical company:

The research party was undoubtedly one of the most enjoyable and meaningful activities we have done together, as it allowed all of our members to put their scientific knowledge into service. At the public hearing, we brought the science in a strong and righteous way that demonstrated our prowess as scientists and commitment to serving the people. Each of us comes from different disciplinary backgrounds, including public health and environmental engineering, and our comments showed that our concerns were to be taken seriously. The local press coverage of the hearing reflected this, as they reprinted much of the strong commentary we brought forward. Many of the environmental regulators present expressed in private that they were impressed with our comments afterwards. (Chapter Reports 2019)

As part of their work opposing the construction of the Line 3 pipeline, the Twin Cities chapter also formed a working group which focused on reviewing project permits related to the pipeline, submitting written comments to regulators, and preparing public talking points. The SftP chapter was one group in a larger grassroots coalition of individuals and organizations, and their efforts “sought to leverage our scientific training to engage with systems of power that repeatedly fail in their missions to protect the public good.” Through their connection with the University of Minnesota, the SftP chapter also obtained three university grants which were transferred to Indigenous organizers (Chapter Reports 2019).

In another example of bringing the training, tools, and reputations of scientists out of academia and into communities, the Western Massachusetts chapter has been involved in a longstanding campaign to bring public attention to the health problems related to mold in housing. The chapter worked closely with Tatiana Cheeks, a local mother who became a community expert

on mold after her son developed respiratory issues which led to clashes with her landlord over the issue. The chapter has worked with community organizers to bring attention to the issue of mold contamination while situating the problem within a broader social and political context, while also working toward public education, community outreach, and instigating change.

### Centrality of Labor, 2022

From 2017–2019, the organizing energy was largely sustained by the lingering excitement of revitalization, culminating in the 2018 Ann Arbor convention attended by hundreds of activist-scientists across the United States as well as a retreat in summer 2019. However, today, chapters that contributed significantly to the early years (Atlanta, East Tennessee, Santa Cruz, Twin Cities) no longer exist, and other chapters with a large member presence (Ann Arbor, Boston, New York City) have not been meeting or organizing. A pattern in the first phase of revitalization was consistently a process from political self-education to agitation and advocacy. Decades of reactionary politics within the belly of the US empire had made scientists and technologists individualistic and docile, inculcating them with the belief that science is neutral or apolitical. Scientists were finding collectivity in an unfamiliar space, and much effort had been devoted to reconnecting with the organization's past and reeducating each other about radical politics. Theories are often reflected in action—the aforementioned organizing activities straddle institutional reforms, grassroots community engagement—and the reliance on chapter's own initiatives was replicated from the previous generation.

Where have all the radical scientists in these chapters gone? The COVID-19 pandemic was certainly a systemic shock. At a first level, the dwindling of organizing energy could be interpreted as the result of the changing social, economic, and political conditions engendered by the virus. This is too simplistic and cannot fully explain the rather gradual drop-off in activism. In the first year of the pandemic, SftP across chapters worked together remotely to provide resources for pandemic response. The COVID-19 Working Group and Mutual Aid Working Group were formed to promote public health education and address the material conditions of members' communities, respectively. The Boston chapter, for example, continued to organize remote teach-ins related to their earlier project on People's Green New Deal. In 2021, the magazine resumed from a temporary pause in print publishing and, somewhat counterintuitively, increased circulation numbers.

It is possible that similar factors which contributed to the end of the first iteration of SftP in 1989 are replicating and hindering the revitalization pro-



ject at an accelerated pace. The early years (1970–75) of high-impact agitation, riding on the backdrop of the New Left movement, gained a critical number of supporters that sustained activity for the next decade. Today, the anti-Trump sentiment, without large anti-systemic political movement to ride on, seems insufficient to sustain SftP’s activity for more than a few years. Compared to the previous generation, when many organizers stayed on for at least five years to even more than a decade within SftP, the turnover rate for organizers today is exceedingly high; the same organizers’ names are not even recognized by the members who join the next year.

But there may also be a silver lining that points to new opportunities for organizing and radicalizing scientists as workers. The obstacles to organizing—limited labor-power, high turnover, local chapter dormancy—all point to the political economic structure of scientific labor in the era of late imperialism. In contrast to the 1970–80s, scientists today no longer occupy a privileged social stratum. With increasing neoliberalization of higher education and research, the majority of scientists are “trainees” (i.e., student workers), who receive close to minimum wage with little or no benefits. Any veneer of career prospect or security is peeled away by the easily identifiable organizational form of academia: rugged individualism, faux meritocracy, entrenched hierarchy, and hypercompetition. Capital circulating across governments, universities, and the private sectors polarizes student workers (the actual producers of scientific knowledge) and solidifies their class position as well as consciousness. Whereas the New Left generation of SftP was unable to articulate fully the proletarian causes for science and scientists, our generation is undergoing more of an explicit and recognizable process of proletarianization.

One concept that is central to the POU but less visible in early chapter reports is the importance of integrating labor struggles into the work that SftP is involved with. Many in SftP are also rank-and-file members of graduate student or postdoctoral worker unions who organize labor in the scientific workforce. In December 2022, the publication team released *Organize the Lab: Theory and Practice*, a collection of essays on organizing scientists in academia (Science for the People 2022). The book became the most well-received publication since revitalization and generated widespread interest. Four separate book events in the subsequent months coincided with waves of academic labor action, including the University of California strike. One of the events was in collaboration with and fundraising for striking student workers at Temple University. The campaign around the issues of scientific labor increased SftP membership and generated significant organizing energy to create new local chapters.

It is worth noting that such a lack of job security for today’s scientists, students, and science workers would be expected to shape the tactics, strategies,

and perceived horizons of the revitalized SftP. While today we participate in protests, sit-ins, and counter-recruiting, the activities discussed in the SftP Chapter Reports appear tame in comparison to the disruptive and confrontational actions that characterized the original run of the organization. The job security enjoyed by academic scientists of the 1970s may have been key to that generation to engage in actions that would be perceived as much riskier by today's precariat.

And so, we find ourselves once again in unfamiliar terrains untrod by the previous generation or even during the early years of revitalization. The organizing energy tied directly to workers' material conditions will hopefully be more sustainable than uncoordinated campaigns; but also looming are dangers of economism and trade union conservatism that plague the Northern labor movements. The unionized scientists are poised to become class conscious through their own exploitation; but exploited workers may not have the organizing bandwidths to engage in political action beyond union spaces. Labor is at the forefront of class struggle, but it alone is not sufficient to create new social relations nor presents immediate or obvious solutions to the crises in science we face today: climate change, neo-colonialism, and the perpetuation of discriminatory ideologies. How will SftP connect labor struggles with the radical science movement? How can scientists be radicalized and direct their sciences to serve the people? How will SftP, as an organization, create a vision, a philosophy, and concrete strategies that radicalized scientists can act collectively? It is clear that SftP's revitalization is in need of a new path that can answer these questions.

## **Conclusion**

One achievement of SftP has been to articulate and exemplify a radical science-based social movement schooled in the Marxist tradition. The theories, as they often are, corresponded to the ethos of the time; the actions, likewise, were sometimes incongruent and inconsequential. However, where SftP succeeded, and many others failed was through the consistent attempt to unite theory and action.

In this article, beyond laying out the aims and achievements of the revitalized SftP, we took a critical approach to identify some weaknesses within the movement. Even with twenty years of publication from 1969–1989, with living members from the older generation in the midst, and with increased efforts to develop cogency and clarity about our views and aims, radical science is still in its infancy in the year 2023. Making a mature science for the people requires vigilance against complacency over SftP's legacy, against an ahistorical replica of past ideology or organizational structure, against repeating some

of the mistakes of the past, and against acquiescing to obstacles, setback, and (ultimately) inaction. As the organization begins this second, post-pandemic phase of revitalization, as new chapters, working groups, and campaigns are being formed, the issues raised here will invariably shape our movement's evolution.

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