Chapter 12
Street Medicine as a Science Education for Activists

Matthew Weinstein

Abstract This chapter looks at the international street medic network, i.e., the network of activists who serve as emergency medics at protests, as a model for an educational movement that crosses scientific and activist knowledges. The chapter examines the medical practices of the street medics; reviews their origins in the United States Civil Rights Movement and briefly traces their history through the counter corporate globalization struggles of the 1990s and 2000s to the present. While medics are most well known for their work at protests treating tear gas and other medical emergencies, the chapter's main focus is on their work as educators. The medics engage in a wide variety of educational projects including trainings for new medics, workshops for activists, and general public health outreach through a variety of publications for their communities. The chapter also reviews the pedagogical practices that the medics use, including hands on experiences and, more importantly, narrative which serves a variety of functions in the education of medics. Finally, the chapter reflects on the insights that medics might bring to crafting a more socially just science education in the K-12 classroom. The chapter links the decaying social welfare systems experience by students under neoliberal governance to the conditions of protest to make a case for a science education guided by a street medic ethos.

Keywords Science education • Neoliberalism • Street medics • Activist education

This chapter explores the ways that science and science education has been organized in the service of resistance to corporate global agendas. My focus is on the United State's context, though the network I am describing is international with large nodes in Canada and Europe. This network consists of medics, i.e., people who deliver medical care, and includes MDs, nurses, alternative medical practitioners, and lay

M. Weinstein (✉)
Department of Education Program, University of Washington-Tacoma, Tacoma, WA, USA
e-mail: matthеww@u.washington.edu

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medics who organize to educate their community in medical self care and to actively provide medical service in the chaos of mass protests against neoliberal restructuring.

My interest in the medics began as a way of empirically exploring frustrations I have had with the discourse of social justice within the field of science education. These frustrations included inattention to the corporatization of institutional schooling (Apple 2001, 2010) and the limits of social justice in science education's focus on projects largely isolated from the more radical challenges to global economic and cultural restructuring. Social Justice in the "Rethinking Schools" mode has focused on curricular levers to permit teachers to air progressive points of view, e.g., for emphasizing environmental work. But such efforts are perpetually at risk of being side lined as schools become (again, I am focused on the U.S. context to which I can bear witness) increasingly driven by scripted curricula, judged solely on test measures, and put into perpetual crisis as faculty and students are put into permanent migration as institutions fail to meet Annual Yearly Progress in high stakes tests (failure to meet specific standards forces schools to close under the No Child Left Behind law). As such, at best social justice is shoe horned in as a curricular topic.

To better understand this shoe horning of social-justice-into-projects I wanted to examine science education – I take science, following Bruno Latour (1987), to include those related and co-dependent networks of medicine, engineering, etc. – that was developed for social justice, not social justice developed for education. In other words, what does science and engineering look like when it is produced to serve struggles for social justice and not merely applied to it post-hoc. Since this was education for a social movement, it would by necessity happen outside of formal schooling, so that its time, place, and content could be tailored to the needs of activists. This lead to an examination of social movement literature to identify moments of intersection between technoscience and movements for radical social justice and social transformation (Weinstein 2010). While several projects of interest emerged from this search, my focus over the last several years has been on the Street Medic network, i.e., the medics organized, among other things, to provide support for anti-neoliberal globalization protesters at the meetings of the G8, G20, World Trade Organization, International Monetary Fund, and related organizations (here in the U.S., that includes both the Democratic and Republican Parties).

Know Your Street Medics

So I want to provide a short, breezy history of the street medics so that ultimately I can turn to the question of how their work could help science teachers' meet their students needs better. Street medics emerged initially in the 1960s as a protester support auxiliary of the Medical Committee on Human Rights (MCHR). The MCHR had originally been organized to fight for the racial integration of the American Medical Association, which had been a whites only organization. In 1965 it organized

the Medical Presence Project to provide (1) medical support for the march from Selma lead by Dr. Martin Luther King and (2) legitimacy to the Civil Rights Movement by having doctors (i.e., middle class professionals) present at the protests (Dittmer 2009a; McCay 2007). Over the 1960s, as the focus of protests broadened and the New Left developed, the MCHR became increasingly divided between those working on policy and legal issues, on the one hand, and those involved in street demonstrations, opening free clinics, and otherwise providing services directly to the mix of social movements known affectionately in the 1960s as The Movement, on the other. These latter medics are generally called street or action medics. The MCHR was also divided between those who came from traditional (or as medics would say "allopathic") medical backgrounds and those trained in other medical systems, e.g., Chinese medicine or herbalism (Dittmer 2009a). In New York City, one group of action medics formed a street clinic called the Broome St. Collective. It included "Doc" Ron Rosen (Doc), a doctor of Chinese medicine who over his career served as medical support in Selma, at the Democratic Convention in Chicago, 1968 (which was the site of huge protests), and the Siege of Wounded Knee in 1973 by the American Indian Movement. Doc, after the MCHR terminated in the 1980s, went on to form the Colorado Street Medics and helped revive the street medic tradition in the early part of the twenty-first century.

The MCHR disbanded in the early 1980s. However, a second wave of street medicine began as a response to a re-emergence of police use of tear gas, pepper spray and other weapons starting most visibly at the 1999 World Trade Organization (WTO) Ministerial Meeting in Seattle. Doc and other medics present at Seattle felt a pressing need for training and organization in the face of the more violent encounters that protesters were likely to face at globalization protests; their concerns were validated in the bloody encounters with police at the Free Trade Area of the America (FTAA) Meetings in Quebec City and Miami, FL. Doc's trainings provided the second wave with both a continuity to the first wave of street medicine and explicit norms and ethics for street medic practice, ethics such as a radical reading of "do no harm" (see discussion of "do no harm" at Street Medic Wikia 2007) and an acceptance of alternative as well as allopathic medical traditions.

Before exploring street medicine both as a practice and as an educational movement, the very dire circumstances in which it is carried out must be made clear.

States of Emergency: Where Only Street Medics Dare to Tread

Street medics are called on to operate when normal legal rules are suspended and the military or the government declares a state of emergency. These suspensions of the normal rule of law happen frequently around the large globalization demonstrations. They also happen in natural disasters, and street medics are eager to serve in both circumstances. In addition to the globalization protests (most famously in

Seattle in 1999, but they are active at meetings of the G8, G20, WTO, and NATO), they were the first to set up clinics after hurricanes Katrina and Ike. They participated in medical brigades in Haiti after its terrible earthquake in 2010.

While the street medics' special skills of improvising treatments in difficult terrain serve them broadly, they are primarily organized to support protesters in these increasingly frequent states of emergency declared at counter-globalization protests. While the suspension of law has been temporary at the local level, the state of emergency has been a more general problem in the last 30 years as around the globe governments have moved to free market policies. The backers of these polices are often suspicious of democracy and popular need/expression. As David Harvey (2005) notes:

> Neoliberal (aka free market) theorists are, however, profoundly suspicious of democracy. Governance by majority is seen as a potential threat to individual rights and constitutional liberties... Neoliberals therefore tend to favour governance by experts and elites. A strong preference exists for government by executive order and by judicial decision rather than democratic and parliamentary decision-making. (p. 66)

But even the experts are problematic here. Consider global warming or the health effects of tobacco, scientific and academic; authority is gladly undermined when seen as inconvenient to the most powerful (this is explored extensively in Mirowski 2011). Public accountability of the most elite is seen as something to be avoided. The inconvenience that the most powerful feel regarding democracy, legal and ethical accountability, and public governance more generally, has lead to an increasing use of states of exception or states of emergency. The United States has been in a continuous state of exception legally since September 12, 2001, after the attack on the Trade Towers of New York City, thrice extended by President Obama, which has lead to an increasing legal gray area where there is little to no accountability, e.g., in warrantless wiretaps and what are known as National Security Letters – which force internet service providers to spy on their customers – of which about 50,000 per year have been issued between 2003 and 2006, not to mention the now leaked news of massive data collection of email and telephone information.

Of course, this shift to the use of suspension of law to accomplish more aggressive profiteering (Naomi Klein shows how in the case of globalization, this profiteering happens at both the local level and internationally (2004, 2007)) affects the poor much more brutally than those better off. Henry Giroux (2009), drawing on philosophical writings by Italian political theorist Giorgio Agamben (2005), has argued that in this "New Gilded Age" the poor are basically thought of as "disposable" populations, people who can not contribute to the consumer economy and therefore should be treated as without rights. This argument emerges from his analysis of what happened to the poorer quarters of New Orleans after Hurricane Katrina where the devastation was the worst. Entire sections of the city were basically left to drown or flee.

The antiglobalization movements are, at their heart, resisting the broad set of policies of this new transnational global order focused on free markets and de-democratization. The street medics enter the picture because, as in their work

in the American South in the Civil Rights struggle, they are trained in how to operate both legally and medically in states of emergency or, as Agamben calls them, states of exception, meaning exceptions to the rule of law.

Street Medicine and the State of Exception

Street medics are creatures of the state of exception. Most have no medical license, they are just highly trained citizens. Normally they would not be allowed to treat, but in emergencies special laws – Good Samaritan Laws – pertain. In addition, as street medics tell it, normally licensed doctors cannot provide service within states of emergency without the permission of the governing authority at risk of loss of license. This barring as told by medics is encoded in the Geneva Convention. My own untrained reading of the UN Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field finds that there certainly are provisions that demand the mutual consent of both sides before medics can serve (Chapter IV, Article 7); however, it's unclear if the "zone of no protest" (the phrase used in Seattle, 1999) in which activists protest qualifies as armed conflict, or what laws remain to protect them. The bigger issue is that in crossing over into the state of emergency, medical licenses are de jura suspended. As noted, this is not a new problem for medics. When Northern doctors operated in Southern states in the Civil Rights struggle of the 1960s, they also were working without license, since medical licenses are granted by states (Dittmer 2009b). The doctors in these circumstances were also reduced to operating under "Good Samaritan Laws."

The Good Samaritan Laws do not provide carte blanche. There are rules for who can be a Good Samaritan, and these rules shape the script that street medics must use in the field. For instance, the provider of help must operate with consent and within his or her competence. These constraints provide a critical part of the training of street medics: learning allowable ways of gaining consent and knowing the limits of ones ability to diagnose and treat. It should be also clear that Good Samaritan Laws are limited; recently, the Supreme Court of California allowed civil suites to continue against volunteer aid providers (aka good Samaritans) (Williams 2008).

One effect of operating only as good Samaritans is that people with a wide variety of backgrounds are able to serve as medics. While doctors and nurses certainly do participate, most second wave street medics have shorter, often more specific, trainings for the conditions in which they will act. These can vary from several week Wilderness First Responder (WFR) Trainings, which are understood as providing the most important skills street medics need – wilderness medicine like action medicine works outside the "golden hour," i.e., the time after injury when treatment in a hospital is most effective – to 20 h street medic trainings, usually offered by medic collectives twice a year or prior to major protest actions. Medics often come with backgrounds both in traditional and non-traditional medicine. Others, assisting medics, may be untrained, but take responsibility for carrying and obtaining clean water, bandages, etc.

Street medicine is a kind of scientific practice for activists; it is developed and tested within the chaos of the eruptive violence of protests. The street medics' purpose is to protect first protesters and then all others, but also to re-enable protesters, to have them treated and re-confronting police and the National Guard. In ethnographic interviews with a street medic collective, I call – a pseudonym to protect their identities – the Seaview Street Medic Collective (SSMC) this was expressed in the joyous pride they had in seeing on television protesters with multiple streaks from successive exposures to pepper and teargas:

> Carin: we treated a lot pepper spray to some and could patch up. . .
>
> Bonnie: But if you look at like videos from the last Seaview protest you see the people who have the whites around their eyes and running down. You see multiple lines they're different colors. That's because they were eye washed multiple times from being pepper sprayed multiple times. And it's amazing when I watched the news after that how many people I saw. I cured that guy! I cured that guy! (laughs) (9/18/2008)

Medics often emphasize that they are not protesters and that their work is non-political. Often they seek to be unaligned in the often-fractious debates between radical groups doing the work of organizing protests. They also know that they may need to provide care to police, counter protesters, etc. Here, however, in Bonnie's joy, a real politics is made visible. Medics sustain protesters and, hence, protests. Police are aware of this, and they have taken to targeting (literally) medics. Medics are seen as group leaders (and while they may deny playing leadership roles within coalitions, they are treated with enormous respect; one amateur video about medics is called "All Hail the Street Medics") and thus are at higher risk of arrest and injury in protests. To protect themselves medics often "run unmarked" meaning serve as medics without crosses or caducei or other symbols to identify them.

So part of street medicine is a practice honed by the needs to resist small and large-scale violence – as well as the chaos of emergencies that are political, natural and both simultaneously. However, much of street medicine happens away from the riotous atmosphere of protests and hurricanes. That part is primarily educational, some of it also involves scientific research on treatments. It is these aspects of street medicine to which I now turn.

Street Medicine Is Education

In terms of time and energy spent, street medicine is as much an educational activity as a medical practice within demonstrations. Street medics engage in at least three types of explicit educational practices: "trainings" that produce new street medics (or strengthen the skills of existing medics), "workshops" that educate activists and members of alternative communities about medical self care around issues pressing for those communities (these workshops range from proper dress for and diet prior to demonstrations, bicycle safety, and medicine for traveling – a significant part of

their communities are nomadic), and, finally, publications, i.e., outreach through flyers and websites on topics ranging from free health resources to issues of rape and consent in college communities. The workshops and flyers point to a broader interest in medicine on the part of street medics rather than a narrow concern with demonstrations. As one founding member of the SSMC explained:

> Amy: You'll hear more about this later but the flyers that I was showing Bonnie and Carin earlier that there's an herbal clinic starting up, a free herbal clinic downtown and there's also [group name] and they work with needles, needle exchange, and people on the streets and that kind of stuff and, you know, they're like we really want to do stuff with you; like come and do workshops. We want to set up regular workshops. Like we have so many plans and so many requests for the educational aspect of our job. You know we're almost – *we're not only a resource to come out and keep people safe physically in a protest or riotous situation*. (9/18/2008, emphasis mine)

Carin, who worked on issues of Latin American liberation politics, went beyond this and emphasized that her work as a medic was an extension of Freirian (1968) popular education, that education was central to her medical work.

Trainings for new medics typically draw between 10 and 20 people. Much of the training builds on that of mainstream EMT and wilderness first responder skills. The education consists of short lectures on protocols: patterned interactions that medics use to treat specific injuries. These protocols are boiled down to acronyms to help medics remember the procedures, acronyms such as ABC (airways, breathing, circulation) and LOC (levels of consciousness). This reduction to standard scripts was important, since, as was emphasized repeatedly in my own training, in the chaos of demonstrations medics become paralyzed, or as one of my teachers explained, "Eyes turn to light houses, hands turn to flippers. Go back to really dumbed-down [models]. Sing the ABCs (one of the acronyms for a key protocol)" (10/26/2008). In other words, in the swirl of risk, violence, and disorder of demonstrations, medics easily can become too focused and literally lose fine motor muscular control. Only by working with easy to access, algorithmic procedures could medics function in a field of pain, violence, and panic.

In addition to lectures, trainings consist of medics practicing key skills such as approach, consent, bandaging, splinting, and documenting. While most of the medicine we learned was "Western," some techniques were from Chinese medicine including a treatment for hypothermia and asthma. At the training's end medics worked in teams to practice treatment in complex scenarios that tried to simulate the informational and physical noise of demonstrations. These short practice sessions and simulations were as close to student centered learning as the trainings ever got. The pedagogy was closer to a master-apprentice relationship, in which we, the students, tried to consume as much information as the battle-hardened teachers were willing to provide. Central to their teachings were stories, accounts of specific encounters with police, counter-protesters, the military, and protesters themselves. These stories at once credentialed our teachers, but also became the material for understanding the function and specificity of the practices we were learning.

Contemporary science education has placed an emphasis on inquiry as a method and content for science education. In our trainings the emphasis was on protocols

and scripts, for the reasons just explored. The fact is, the medics have used inquiry, most explicitly in clinical trials conducted to find treatments for tear gas and pepper spray (chemical weapons). One collective, the Black Cross, did blind trials to assess the effectiveness of different treatments for both skin and eye exposure to chemical weapons (Black Cross Health Collective 2003). These results are widely known among street medics. Elsewhere I have discussed these trials and problematized their applicability to action-medicine (Weinstein 2011). The fact is, the trials and the inquiry upon which they depend and the work of action medicine exist in almost parallel universes: in the first there is flexible time, reflection, and, critically, social stability; in the second, there is chaos, danger, and a thousand pressing demands, including some with life and health consequences depending upon medics' responses. It is not that these two universes do not inform each other; they do, though not as directly as medics or science educators may like (many things that work in the clinical space fail in the field). This model of two universes: one under martial law, the other under civil law provokes the question: in which do students and schools operate? Which version of science and time is appropriate for students?

The Street and the School

At my medic training, I was approached by several of the teachers who all said some variant of "this is what high school science should be." Urban public schools, like many public institutions, and many poor communities, have been challenged to the extreme in the current free market embrace, e.g., through regimes of testing, No Child Left Behind forced school closures, budget starvation, and enforced pedagogies that resemble factory work more than teaching. Science education has tended towards embracing these "reforms" (though the focus on inquiry actually has helped deflect calls for behaviorist, scripted direct instruction regimes that have hegemony in math and language arts).

My growing understanding of the medics' urging of street medicine-as-science education is that they were not simply saying that students should be street medics. Also, it was not just a call for practicality, but also a radical pushing of a science education that fosters resistance to the dire legal, political, and material world of current moment, meaning a world in which law and social stability are under attack. School science, I believe, needs to focus on a community driven agenda of reclaiming knowledge in the wake of the abandonment by much of the state, or better said: left to corporate plundering and waste. Science educators are in a good position to transform schools into sites where communities can collectively develop resources to address questions of food, shelter, and medicine. If there is one domain where I see this kind of work flourishing in schools it is in the areas of food politics. Many schools in my area have used their lands as the sites of community gardens. These gardens connect local diets, cultures, and technoscientific practice in ways that directly benefit the members of the community. Schools have also become sites where corporate food is contested: vending machines fought over and lunch menus

resisted. At the moment this is for me the most tangible example of mixing of science, health, multiculturalism, and community funds of knowledge. It can serve as suggestive models perhaps for science students as community health workers, as community ecologists, as community storm/earthquake mitigation experts, as community planners with knowledge of energy and transportation flows that materially sustain communities.

In all of these domains, however, teachers will have to adopt the street medics' eclecticism. Western medicine, diet, and construction practices alone will not do. To be effective, not as measured in test scores, but in the health of urban communities (I cannot speak to the circumstances of rural communities, which face their own neoliberal fracturing – and fracking) teachers must be in open hearted dialogue with the neighborhoods they are serving, communities which have their own cosmologies (plural).

Of course teachers are very much under pressure to produce standardized, consumer students. I do not want my call for teachers to formulate a pedagogy of resistance and reclamation to be taken as naïve. I know, in the era of hyper-standardization, there are fewer places and times for resisting; more of the curriculum is under high stakes monitoring. I think that there are still opportunities. For novice teachers these may be at the end of the year when the state has measured every one; or in classes not covered by the test; or in after school clubs (community gardens rather than robots, which seem the popular STEM after school thing at the moment). The emerging standards in the U.S. (the so-called Next Generation Science Standards), in fact have spaces for exploring ecology, connections between science and society, and the development of instrumental (useful) knowledges, however pushed to the margins they are.

The street medics seek to create a technical craft wholly organized to promote social resistance to corporate power – much of that power embodied by the state. Science educators, being employees of the state, cannot simply discard their given curriculum and merely function in resistance to the powers-that-be, but they can act in guerilla ways to find spaces and times within curricula to develop practices that are grounded in the intersection of community desire and technical know-how. That I believe is what we in formal science education can take from the medics' brave work.

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