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Fifteen claims: social change and power in environmental studies

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Abstract Claims about social change and the dynamics of power permeate the environmental science and studies (ESS) curriculum. These claims are frequently implicit, under examined, and contradictory. Their acritical internalization by students and faculty can undermine the efficacy and relevance of an ESS education. This essay describes 15 such claims and summarizes patterns of ESS student response from three workshops. We make no argument about which claims are superior, how social change occurs, or how political power is best analyzed. Instead, we seek to encourage those who design and deliver ESS programs to become more self-critical and intentional when disseminating, however unwittingly, claims about power and social change.

Keywords Social change · Power · ESS curriculum

> It isn't what we don't know that gives us trouble,
> it's what we know that ain't so.
> – Josh Billings (often incorrectly credited to Will Rogers (Keyes 2006))

Undergraduate environmental science and studies (ESS) programs are in the business of social change. By their very nature they challenge the moral defensibility, social desirability, and environmental sustainability of the status quo. Most ESS programs avoid wearing a social-change agenda on their sleeve, and some mistakenly imagine themselves to be engaged in value-neutral, objective work (Maniates 2013). Nevertheless, by virtue of their inescapable normative agenda and their engagement with problems made "super wicked" by the clash of values and an urgent need for action (Levin et al. 2012), ESS programs inevitably privilege and propagate some theories of social change over others (Dryzek 2013). In doing so, they inculcate students with particular understandings of social power—about how power operates in the world, about how power connects to environmental degradation, and about how those troubled by the unraveling of the natural world might go about acquiring and asserting their own power.

Inspired by the work of ESS-curriculum scholars like Clark et al. (2011) and Proctor et al. (2013), we believe that those working within ESS programs could benefit from continued conversation about the social-change assumptions and conceptualizations of power that permeate their field. With this essay, we seek to contribute to this conversation by detailing 15 understandings of power and social change that are, to our experience, most commonly taught, fostered, embraced, or permitted through benign neglect to thrive in ESS undergraduate curricula.

Each of these 15 items is a highly stylized expression of what we see in the field; for purposes of clarity, we largely avoid injecting qualifiers and conditions into our descriptions. With this list, we wish to highlight the simplified (if not simplistic) causal claims about social change that populate the ESS landscape. Some of these understandings are highly constrained or specific to particular contexts, and many are contradictory. Some overlap and a few naturally nest together, producing familiar narratives about why social change occurs. Several stand in outright opposition to one another, and some facilitate the ongoing simplification and degradation of critical natural systems (e.g., Princen 2010). One might expect the seeming coexistence within ESS curricula of these 15 claims to produce unwelcome dissonance.

Our purpose with this list is to make apparent what is often hidden. We do not claim that we know how social change happens, nor do we argue for the superiority of one of these understandings over another. Each of the 15 elements may be highly useful in particular settings. For instance, the "buy

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green" understanding of social change may work very well among a subpopulation that has strong social concerns and necessary resources and is focused on those elements of commerce especially vulnerable to small swings in consumption patterns (e.g., Stolle and Micheletti 2013). It may be useless among subpopulations that have limited purchasing power, little sustained interest in environmental issues, or a poor strategic sense of how to focus their buying power. Thus, by calling out these claims, we are not denying them; we are not saying they are "wrong." Rather, we are saying that each is an empirical question that can be tested only when the claim is made explicit.

Our hope is that this essay might prompt those who design and deliver ESS programs to become more self-critical and intentional when disseminating, however unwittingly, claims about power and social change. We understand that such introspection and intentionality can be difficult for undergraduate educators, buffeted as they are by myriad demands and uncertainties both internal and external (Palmer 2010). Nevertheless, it strikes us that ESS, for reasons rooted in its intellectual history and commitment to methodological pluralism, has been historically wary of privileging any single perspective on social change and power, preferring instead to let students find their own way through the intellectual thicket, aided by often eclectic coursework in the natural sciences, social sciences, and humanities. The openness and flexibility of this approach can produce cobbled-together notions of social change that manifest themselves as simplistic and counterproductive juxtapositions (e.g., "top down vs. bottom up change"), unchallenged articles of faith (e.g., "things only change when there is a crisis"), or a politics of guilt given life by a "naïve aggregation" model of social change that imagines new social and environmental arrangements arising from millions of small "green" consumer choices. Especially troublesome is the apparent belief among some students that all theories of social change are equally valid, to be mixed and matched according to personal taste, folk wisdom, or the frameworks from their most recent or favorite course.

Implicit claims about social change and the role of power

When analysts, scientists, policymakers, or citizens argue that actor X should pursue action Y to protect the environment or enhance sustainability, they are making claims about how and why social change happens. Frequently, these claims are informal; they are presented and absorbed as "social facts" (Durkheim 1982) about the natural order of things, facts that "everyone" knows to be true.

Such claims unavoidably embody assumptions about power—about the ability of key actors, prevailing institutions, divine beings, or random chance to change behavior, shift norms, alter policy, or reengineer economic relations. This power expresses itself as persuasion, collaboration, or coercion, sometimes autonomous and emergent, sometimes directed and concentrated. Mostly, though, the power in the claim for social change is implicit, covert, or hidden. The following understandings of social change and power are ranked roughly by the degree to which ideas of power are explicitly treated or understood. The first items on the list embody no notion of power, or if there is some notion of power, then it is difficult to detect beyond the commonplace view that social change must arise from some exercise of influence at some time by some actors. Later items offer explicit assertions about how power is accumulated and asserted.

This list is not exhaustive, and our ordering of items along a spectrum of power is imperfect at best. We invite others to add or subtract from this list or to consolidate or divide our categories. In fact, this would be an excellent professional or classroom exercise (see below). Insights from such activities may heighten an awareness of the nuances of power, with benefits to teaching and learning in ESS programs.

1. *Change Just Happens* – Social change occurs much like biological change; it is incremental, evolutionary, adaptive, and autonomous. Whatever the source of variation—genetic, ideational, epistemological, geographic, or cultural—stasis is not an option. Systems change: they always have and they always will. If power is at work, it is power that flows from the logic of established institutions, human nature, or physical laws, all of which are immutable. The task becomes one of adapting to the logic of these systems.
2. *Diffusion* – Social change occurs when a "seed" is planted, whether a new technology, an energy source or a management idea, and it grows and spreads. Others see it, they hear about it, they copy it, they expand it, and a critical mass is reached. The idea or technology or social practice becomes self-reproducing and diffuses throughout society. With diffusion, no agent makes change happen. Power is difficult to detect. To the extent that power exists, it resides in the very attractiveness of the seed or in the genius of the seed's creator.
3. *Social Practice* – Social change occurs slowly, without distinct agents at the helm of change. The world is one of mutually reinforcing norms and practices evolving over time. These norms and practices are the agents of power; they channel behaviors and constrain options, elevating some arbitrary ways of acting and being to the realm of "natural" and "normal" while condemning other possible behaviors and practices to the dungeon of the unnoticed, unimaginable, or impossible. One material version of social practice is "technological lock-in" (Perkins 2003), where past choices about infrastructure and other forms of technological development constrain and

channel contemporary behavior. A more psychological version is the claim that people are "stuck in their ways" or they "just want to be comfortable."

4. *Technological Change* – Social change occurs when technologies and devices allow for or compel peoples' behavior to change. Examples abound in the transportation and housing sectors. When the agents of technical innovation are diffuse and poorly coordinated, power is difficult to locate and this way of social change becomes an instance of no. 2 above. But when agents of innovation and diffusion are concentrated and influential, the exercise of power becomes clear, and the understanding of social change comes to resemble no. 10 or 14 below.
5. *Aggregation* – Social change occurs if enough individual people change their behavior. Power arises as an emergent property from these aggregated behaviors. Power is diffuse, and social outcomes—inequality, economic growth, prosperity, the emptiness of consumerism—are a consequence of mass behavior. Common examples include economic supply and demand functions and voting. Here again, there are no agents of change per se; if there are, they are so widely distributed within seemingly autonomous systems that their actions or abilities hardly matter. With aggregation, if power is implied, it is in notions such as consumer sovereignty and social fads. Still, there is no agent per se, no concentrated power in any subset of actors. Aggregation is frequently tied to claims about the nature of humans as selfish, short-sighted, and petty to explain why things are the way they are and why positive social change is difficult.
6. *Buy Green, Be Political* – Social change occurs when consumers buy with larger social and environmental benefits in mind. Such consumer behavior alters corporate decision-making and, at times, government decision-making. Power emerges from the aggregation of conscientious consumers that together shift the decision making of other powerful actors, e.g., corporate and governmental decision makers. This is a familiar version of the aggregation argument (5), but we list it separately as an example of aggregation driven by moral or political claims, as opposed to seemingly spontaneous forms of aggregation that are seen to occur naturally or inevitably in the system.
7. *Price* – Social change occurs when prices are readjusted to account for all costs across actors and across time, thus allocating resources efficiently. Producers and consumers change their behavior in response to price, and these behavior changes aggregate to produce social change. Power enters, if at all, via the structuring of the market and actions by government or actors with concentrated economic power to influence price. To illustrate, one of us recently heard a respected economist and university leader say, "We know what the answer [to climate change] is: put a price on carbon."
8. *Education* – Social change happens when people acquire new information or when they are shown that their values conflict with their actions. Power sometimes is viewed as residing with the educator: formal teachers, parents, or "elite influentials" including the media, advertising companies, and government propaganda arms. Alternatively, power in this understanding is implicitly located within the information itself, quite apart from the social location or interests of those disseminating the information. "If only people knew X, they would then do Y" is a common expression of this innate power of information.
9. *Good Science, Good Policy* – Social change occurs when problems are assessed scientifically, the assessment is effectively communicated to decision makers, and those decision makers enact measures to change or constrain citizen and business behavior. Power resides first and foremost in the scientific knowledge. Power also accrues to "knowledge brokers" (e.g., Litfin 1995) who communicate this knowledge to decision makers whose subsequent regulatory action is legitimized by scientific knowledge. Much of the policy work on climate change employs this claim.
10. *Planning* – Social change occurs as a consequence of experts and public officials designing infrastructure, framing choice, and configuring the built environment in ways that privilege some behaviors and norms over others. These actions and behaviors, sometimes known as "choice editing" (Maniates 2010), are recognized when one asks about the configuration of space—about why supermarkets are laid out as they are or how roads and bridges are constructed to move and isolate people, classes, or races. Expertise, stealth, and the illusion of objectivity are major sources of power.
11. *Public Opinion and Pressure* – Social change occurs when a large majority of citizens view things in a particular way. These views and the pressures they create drive leaders to act. Social change becomes a function of convincing large numbers of people to care and mobilize, or it is the result of seemingly spontaneous "bottom up" uprisings, sometimes ignited by an event or symbol. Power resides in an organized citizenry, those who do the organizing, and often the seeming randomness of so-called triggering events. This claim implicitly assumes that leaders respond primarily to their constituents and only secondarily to organized interest groups.
12. *Media Attention* – Social change occurs when the media, whether conventional news outlets or entertainment or social media, conveys messages in a convincing and sustained manner. Power arises not so much from the

media themselves or the ubiquity of their messages, but rather from the memes and frames such messages propagate. As a result, according to this claim, public attitudes shift, behaviors change, and leaders act.

13. *Crisis* – Social change occurs when a crisis occurs or when the appearance of a crisis can be created. Peoples' attention is heightened, and the motive for change intensifies. Defenders of the status quo melt away, creating space for the builders of a new order. Power flows from the freedom and initiative to act that temporarily accompanies crisis. Implicit here is a theory of social inertia and personal preference for the status quo.
14. *Interest Group Mobilization* – Social change occurs when interest groups or business interests face low costs and high benefits for organizing around specific outcomes. These benefits may either be specific social or political outcomes or the absence of such outcomes. Power resides in the ability of these groups to lobby government officials, shape public perception and discourse, and conceal the sources and expressions of their own power. Some see this dynamic as the inevitable outcome of the so-called logic of collective action (Olson 1965); others employ this view of social change to explain why some plans are implemented while others are ignored.
15. *Enlightened Elites* – Social change occurs when leaders recognize the imperative for change and act in advance of public pressure, crisis, or media attention. "Leaders" include policymakers, media, commentators, scientists, academics, public intellectuals, planners, and business and finance managers. Power resides with these political and economic elites; they "make" people change their behavior. Implicit here is the assumption of a certain passivity by "the masses" or their inability to act forcefully and creatively.

Workshop insights

One of us (Maniates) conducted three workshops with undergraduate ESS students, using the above list, from April to September 2014. One workshop was on a floating college campus (Semester at Sea) with a diverse international mix of students; another was at a state university with more student homogeneity; and the third occurred at Yale-NUS College in Singapore among a highly internationalized student body. For each workshop, students were divided into small groups and asked to review (first on their own and then in consultation with their group members) the above list and highlight those theories of social change that (i) were familiar to them personally, (ii) appeared from their perspective to be most common to the environmental conversation, and (iii) seemed most relevant to their hopes for asserting power in the world.

Three workshops do not make for a credible data set, yet the similarities among the workshops were sufficiently striking to report them here. In each gathering, students were initially confused by the task; it appeared that they had never been asked to think about social change and power in this way. This slow start never lasted long: students would at first read quietly; then would begin scribbling on the sheets, crossing out some of the claims while circling and connecting others; and then without prompting compare their choices with one another. Some participants quarreled over the finer points of the list ("isn't 'Aggregation' and 'Prices' really the same thing?" for example), while others began to postulate additions to it (e.g., "What about the power of charismatic leaders?"). Most engaged the list and one another with a fierce intensity that centered on the overlaps and contradictions among these 15 claims and the often subtle ways in which such claims find their way into everyday thinking about environmental problems.

The workshops concluded with a rough sampling of dominant patterns of response across the entire group and a group evaluation of the usefulness of the exercise. Three kinds of observations from students emerged, with the first of these focusing on self-knowledge. Participants repeatedly commented on their lack of awareness of the many different (and sometimes competing) assumptions about social change and power they had internalized. They appreciated the opportunity to interrogate competing claims of social change and to discover their own hidden assumptions about the social world.

A second set of observations sprung up around the question of usefulness. A significant minority of ESS students found the exercise unhelpful to their thinking. They argued that each of the 15 claims were equally valid and that efforts to "save the environment" informed by each of these claims should be pursued—something of an "all of the above" strategy. When asked to elaborate, these students suggested that it is difficult if not impossible to predict the effectiveness of activities informed by any of these theories; privileging one over another would thus be unproductive. In response, other students argued that the urgency of environmental problems demands a thoughtful matching of specific notions of social change to particular environmental problems; an "all of the above' strategy was, for them, insufficiently strategic. This disagreement remained unresolved in each of the workshops.

Finally, students observed that their education had not prepared them to critically analyze competing claims about social change. Many characterized their ESS education to date as producing what Merton (1968) called "trained incapacities." Students offered that each of the disciplines they study present as "fact" a particular slant on power and social change: economics underscores the utility of price, communication courses focus on the power of the media, biology classes

employ the "good science, good policy" frame, and environmental studies courses privilege education and crisis as the drivers of change. There is little opportunity to compare social-change claims and reflect on how they might best be combined, at certain times and within particular contexts, in service of sustainability. This gap in the curriculum struck students as a troublesome blind spot.

These workshops highlight the potential benefits of a more explicit treatment of power and social change in the ESS classroom and in the field more generally. They also point to likely deficits in the design and delivery of ESS curricula that cannot be adequately addressed solely by classroom activities of the sort just described. It would thus be a mistake to read this brief essay as a teaching primer. We want these 15 claims to inspire refinements to our list, which remains a work in progress, and to drive those who design and deliver ESS programs to become more self-critical and intentional when disseminating claims about power and social change. We look forward to the day when the capacity to think systematically about power and social change becomes a core competency for all students of environmental change and sustainability.

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