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Sustainability and a Sociology of Monsters

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Sustainability and a Sociology of Monsters

by Stewart Lockie

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Introduction

Sustainability is a monster. As a concept, it is easily defined. Sustainability is about meeting the needs of the present without compromising the ability of future generations to meet their own needs [WCED 1987]. Yet in application sustainability is elusive, complex and abused. Difficulties involved in taking the general principles intra- and inter-generational justice embedded within sustainability and operationalizing these in specific contexts encourages multiple interpretations, disputes over the social and ecological values that ought to be prioritized, conflicting views on how much to discount future benefits relative to current benefits, debate over how cautious to be in the face of uncertainty, and so on. The explicit linking of social and environmental considerations to economic growth through sustainable development, corporate social responsibility and sustainability certifications offer, for some, the promise of a green modernity and, for others, evidence that meaningless “sustainability talk” and “greenwashing” only legitimate and intensify the ecological contradictions of capitalism [see Magnani 2012].

Such conflict and contradiction is, of course, grist to the sociological mill. We are provided seemingly endless opportunities to map sustainability discourses; document the strategies, motivations and achievements of protagonists in sustainability disputes; critique the capitalist growth machine; and champion favoured sustainability movements. But sustainability has not only given us a plethora of topics to

study and debate, sustainability has opened the door to decision-making forums from which sociologists may otherwise have been excluded. Sustainability establishes the expertise of social scientists as no less important to environmental debates than the expertise of physical, chemical and biological scientists [Salvatore and Maretta 2012]. It gives us ground to claim a defined, unique and indispensable intellectual territory. Neither global environmental change nor localized environmental issues can be understood without reference to social impacts, community vulnerabilities and capacities, socially-defined values and so on. At the same time, sustainability refuses to accept Durkheim's maxim that social facts must always be explained by other social facts. Sustainability demands that we allow territorial incursions. Either we allow that social facts may be explained by facts other than social facts, or we accept that the social may not be the exclusive province of us humans. Either way, sociology must be ecologized (Murdoch 2001) just as our collective responses to environmental crises must be sociologically-informed.

It follows that sociologists – environmental sociologists in particular – have much to thank sustainability for. It both keeps us busy and renders our work more important and influential [*ibidem*]. Nevertheless, many sociologists fundamentally misapprehend the productive force of sustainability. We are often so busy, as a paradigmatic community, passing judgment on sustainability projects (particularly projects that do not accord with our own utopian ideals) that we do not take time to comprehend precisely what it is that sustainability does. In fact, it is not uncommon for sociologists to declare sustainability a meaningless rhetorical device while simultaneously utilizing its principles as a foundation for critique.

In this paper I will develop the argument that sustainability is more than a concept or a goal. By mediating human relationships with ecosystem processes, natural resources, future generations and so on, sustainability becomes a material force, an agent, in its own right. As a force that is the product of human action, but never entirely under our control, sustainability demands an approach to the future based on learning, deliberation and accountability. After elaborating this argument in the following section, I will consider who speaks for sustainability and the implications of this perspective for a sociology of sustainability.

Assembling Sustainability

Sustainability is most commonly treated as a concept or a goal. This is not unreasonable. Sustainability certainly is an idea, a discursive artifact, a way of thinking and speaking about human-environment relationships. Equally, sustainability is

a state or endpoint; a set of ideal conditions that can, at least imperfectly, be measured and monitored using appropriate social and ecological indicators. Sustainability is both of, but more than, these things. Sustainability is fundamentally symbolic and it is deeply material – characteristics it shares with ecology, nature, biodiversity and numerous other ways in which we apprehend the world beyond human bodies, languages and cognition. The word apprehend is used here very deliberately. These words are no mere signifiers or social constructs. To apprehend is to grasp – intellectually, intuitively and/or physically. To apprehend may be to understand but it may also be to perceive or to feel, to anticipate, or to capture. Apprehension is cognitive, emotional and corporeal. Through ecology, biodiversity, sustainability and so on we seek simultaneously to comprehend the world in which we live, to belong in that world, and to round-up – to contain and to steer – the unruly interactions of species, substances and energies that comprise it. In apprehending the world, the will to understand cannot be divorced from our affective and material interactions with non-human nature outside of both discourse and the laboratory.

The concept of sustainability, and the multiple interpretations of this concept, do more, therefore, than frame our understanding of human interactions with and through external nature. They mediate those relationships and, in so doing, transform people, ecosystems and economies. We can never simply “talk” sustainability any more than we can simply “talk” ecology or biodiversity. We anticipate, learn, reinforce and (all too often) undermine sustainability. And to the extent that we do, we anticipate, learn, reinforce and/or undermine the conditions for our own wellbeing. Sustainability is more than a useful abstraction or an ideal state. Sustainability is an assemblage, an agent, a force, in its own right – a monster. Appropriated from Actor-Network Theory (ANT) [Law 1992], the metaphor of the monster is deployed in this paper to illustrate the manner in which sustainability is constructed, brought to life, and yet, like Frankenstein’s creation, never entirely brought under control. Sustainability does not, however, wander the Earth pining for human contact. Neither can it speak for itself. Sustainability can exist only in relation to the network of beings, techniques and relations through which it is assembled, measured and contested. Sustainability’s agency is always – like power, communities and myriad other elements of the social – a network effect.

Prominent ANT theorists are largely silent on the topic of sustainability, a strange state of affairs given their arguments for conceiving the social as a “parliament of things” [Latour 2011]. Like it or not, sustainability has been appointed *ex officio* representative of non-humans and future generations in today’s legislatures. This is not to say that ANT theorists have noth-

ing to say about environmental politics. Latour [2010; Latour 2011], in recent years, has extended his longstanding critique of the Cartesian separation of society and nature, arguing it is time us humans abandoned both the modernist project of emancipating humans from nature and the naturalist project of emancipating nature from humans. The alternative, he argues in his *Compositionist Manifesto*, is a project of envisioning and co-creating new socio-ecological assemblages and possibilities. The metaphor of composition is intended to signify the manner in which things must be brought together in these assemblages without losing their unique character, the importance of moving from critique to construction and, at the same time, the importance of distinguishing between successful and unsuccessful, good and bad, compositions. The failure of the modernist project and belief in the march of progress should not force us into retreat from innovation, he argues, but into compromise, care and precaution.

It is hard to disagree with this final proposition. But with whom is Latour arguing? Who are these “moderns” and “naturalists” other than convenient strawpeople? In which political forums are environmental issues still treated as straightforward choices between economic development and the protection of unspoiled nature? Of course there are some, but they are no longer the norm. Even the most zealous defenders of economic growth, on the one hand, and wilderness conservation, on the other, are forced to accede to the broader social-ecological agenda of sustainability. Latour does acknowledge the forums in which environmental politics are played out but he does not analyze them in any detail. Such an exercise would uncover just how widely accepted the principles laid out in his *Compositionist Manifesto* already are. What, after all, was sustainability as defined through the 1987 Brundtland Report if not an attempt to reconcile the ways in which economic activity is organized with the need to reverse environmental degradation and promote human rights and poverty alleviation [WCED 1987]? What of environmental justice movements and their re-casting of environmental degradation as a form of violence perpetuated on the bodies of the socially marginalized? The problem is not that no-one prior to Latour has recognized the importance of replacing human exemptionalism with cautious innovation to create new socio-ecological possibilities. The problem is that moving from general principles to concrete actions is difficult, answers are not always obvious, uncertainty fosters inertia, values are ambiguous and, perhaps most importantly, existing interests are threatened. In short, power is confronted.

Complicating this, sustainability is not uniform in time or space. To illustrate this point, Table 1 identifies four ideal-typical rationalities, or ways of thinking about

sustainability – eco-efficiency, ecological, bioregional and eco-social – and provides examples of how these rationalities are applied through specific policy and management instruments [Lockie *et al.* 2006]. The four rationalities are not mutually exclusive (and neither, I expect, are they exhaustive). Individual enterprises that utilize eco-efficiency at the field/factory level may use tools at a higher level that are more redolent of ecological and eco-social thinking. Planning at a bioregional level, similarly, may accommodate all three other rationalities. As popular as calls are for various forms of localization in the resolution of environmental problems [e.g. Carrosio 2012; Salvatore and Maretti 2012], the scale of application for each sustainability rationality is not obvious. Sustainability – the monster – does not don new clothes or provide straightforward answers to the problem of operationalization as we shift our gaze up and down.

As always, it is not principles that are the problem, it is agreeing how to operationalize these principles within constraints established by the social-ecological assemblages we are attempting to steer. Sustainability does not allow us to compose any future, or any set of possibilities. Again, without claiming these to be exhaustive, it is possible to identify at least three inter-related sets of demands that may be attributed to sustainability:

Sustainability demands learning. As global environmental change illustrates, the temporal and spatial dynamics of human-nature interactions are characterized by processes of evolution, discontinuous change, interactive effects and unanticipated consequences (Lockie *in press*). Maintaining a favourable environment for humans can never – at least not in the long-term – be about maintaining steady-state ecosystems, communities or economies [Steffen *et al.* 2007] and nor, therefore, can it be about continuing to plan on the basis of current knowledge and institutional arrangements for environmental governance. To state the obvious, ignoring what is known, and what will be known, and myopically acting as though humans can compose any assemblage of future possibilities they like is to invite catastrophic failure. Today's knowledge of Earth-system processes and other socio-ecological assemblages will not only be proven incomplete, it will, eventually, be proven redundant. Objects of interest will morph in potentially unpredictable ways. Our knowledge of them will no longer be (at least entirely) relevant. The future must be planned (or composed) but, even more so, it must be learned (see also Tabara *in press*).

TAB. 1. *Sustainability rationalities (adapted from Lockie et al. 2006)*

Rationality	Description	Examples
Eco-efficiency	<p>Conceives sustainability in terms of efficiency. Resources are used judiciously to achieve the maximum possible level of economic activity for any given level of material and energy input. Environmental damage is minimized by controlling the release of pollutants into surrounding environments.</p> <p>Occupational health and safety is monitored and subject to continuous improvement.</p>	<p>Precision farming Environmental Management Systems Corporate responsibility Pollution trading</p>
Ecological	<p>Construes sustainability in terms of the ability of production systems to provide for their own needs and to recover from environmental perturbations.</p> <p>Farming and forestry systems are designed in ways that mimic the productive processes and inherent checks and balances of nature.</p> <p>Industrial systems are designed to recover and recycle waste energy and materials. The aim is to substitute management intensity for input intensity.</p>	<p>Organic farming Industrial ecology</p>
Bioregional	<p>Seeks to integrate individual enterprises at a regional level in a manner that preserves the integrity of existing ecosystems and landscapes.</p> <p>Watersheds, or catchments, often serve as the unit for bioregional planning, management, and institutional reform, due to the role of water in linking physical and ecological processes throughout landscapes.</p>	<p>Watershed management Ecosystem-based management Strategic Impact Assessment</p>
Eco-social	<p>Focuses on the organization of social relationships to meet diverse human and ecological needs. Social and economic considerations extend beyond enterprise viability to include issues such as the vibrancy of local economies, the needs of consumers, and so on.</p> <p>Emphasis is placed on the ability of systems to provide for their own needs and adapt to changes in the wider environment, but at a wider scale than natural systems rationality and with an overt concern to integrate the social and the natural.</p>	<p>Community-Based Natural Resource Management Multifunctional agriculture Fair Trade</p>

Sustainability demands deliberation. The human environment itself is a shifting terrain of knowledge, values, interests, aspirations and coalitions. These can neither be understood, nor managed, using technocratic epistemologies and methods alone [Dryzek 1990]. As environmental disputes play out (indeed, any exercise in environmental or natural resource governance), competing knowledges, values and aspirations are brought into contact and potentially redefined just as interest groups are formed, amalgamated, disbanded and re-formed through the life of disputes. Widespread participation in deliberative approaches to resource management is important not solely on the basis of procedural justice and the expression of democratic rights (as important as these are) or for capturing and utilizing local or indigenous knowledge [Magnani 2012]. Participation and deliberation are fundamental to understanding and responding to the dynamic ways in which social capacities, vulnerabilities and impacts are constructed and re-constructed through processes of social-ecological change [Lockie 2001].

Sustainability demands accountability. It is not enough to compose new socio-ecological possibilities. Our grasping towards the future must be evaluated. We must distinguish – both in prospect and retrospect – between appropriate and inappropriate, successful and unsuccessful, good and bad, attempts to assemble future social-ecologies. Numerous institutional arrangements have been implemented throughout human history to impose such accountability (for example, property rights and responsibilities, pollution licensing, production standards etc.). Sustainability demands that critical scrutiny, through learning and deliberation, of these arrangements be extended and intensified. In particular, it demands that scrutiny be focused on the distributive impacts of socio-ecological interventions across both space (intra-generational accountability) and time (inter-generational accountability).

Speaking for Sustainability

Who then speaks for sustainability? How are its demands articulated? As the contributors to this special edition of *Sociologica* show, many who speak on behalf of sustainability attempt to check its demands by focusing on limited notions of eco-efficiency. Eco-efficiency seeks to maximize (as per Tab. 1 above) the transformation of material and energy inputs into commoditized material and service outputs and thus to minimize waste. Pollution and other social and environmental externalities, from this perspective, are more than social and environmental problems, they are indicators that potentially valuable resources (including surrounding environments) are not being priced and used effectively. They are a sign of market failure. Governmental

institutions have responded to the “market failure” argument in two broad ways [see Lockie 2009]. First, they have adopted policy instruments that attempt fix market failures by pricing natural resource inputs and/or waste outputs more appropriately, thereby forcing users to internalize these as costs of production (e.g. eco-taxes). Second, they have adopted policy instruments that use market-like mechanisms to allocate incentives to preserve natural ecosystems (e.g. biodiversity auctions) and to price pollution (e.g. tradable pollution permits). Further, certification and labeling schemes based on audited compliance with various sustainability standards have been widely promoted and adopted by social movement organizations and corporate coalitions as means to ensure that businesses are able to pass the costs of environmental protection on to consumers (e.g. Forest Stewardship Council, Marine Stewardship Council etc.).

Criticism of sustainability standards and other eco-efficiency measures is often focused on their omissions (typically human rights and the protection of ecosystem processes over greater spatial and temporal scales). Such omissions are not surprising. Developed as responses to those aspects of non-sustainability that can plausibly be explained as outcomes of market failure, eco-efficiency measures inevitably “black box” (i.e. leave unexamined) people, ecologies and values that lie outside of specific commodity circuits. Take Cucca’s analysis of green urbanization in Vienna, Vancouver and Copenhagen as an example [Cucca 2012]. In Vienna, the municipal authority has combined a strong commitment to public housing with support for non-profit housing associations, energy efficiency, improved public transport and green space. This has encouraged both architectural and social experimentation (e.g. car-free housing projects) while remaining sensitive to residents’ preferences and housing affordability. By contrast, the greening of cities like Copenhagen and Vancouver has led to the displacement of disadvantaged residents. This has happened both directly, through the disposal of public housing in order to free up resources for investment in other infrastructure, and indirectly, through the increased desirability of revitalized urban spaces to migrants (both domestic and international) and subsequent inflation of housing costs. The commodity circuits of inner-city housing and transport in these latter cities are very likely more energy efficient now, in relative terms, that they would be had an alternative path of gentrification been followed. But gentrification and its impact on former residents must remain black boxed if the hip green veneer presented by Vancouver and Copenhagen is to stick.

Eco-efficiency is, as quoted by Magnani [2012], a necessary but insufficient condition for sustainability. This is not a problem where those speaking for sustainability are willing to acknowledge the limitations of eco-efficiency. However, there

are many interests at stake when more fundamental reform of commodity circuits is required. Biofuels offer an instructive example. Until relatively recently, more widespread use of fuels derived from feedstock such as corn and sugarcane looked an ideal way to reduce greenhouse gas emissions, safeguard energy security and improve farm incomes, prompting the US, EU and other governments to subsidize and set targets for biofuel use [Bozzini 2012]. In principle, the idea of building an energy economy based on regenerative processes of photosynthesis and plant growth is very attractive. But when a series of global food crises began to hit in 2007, biofuels were identified among the chief culprits. At the same time, assumptions regarding the greenhouse gas neutrality of biofuels were increasingly called into question and expanded cultivation of biofuel crops was linked to deforestation, biodiversity loss and landgrabbing [Carrosio 2012]. In the US, to date, such ecological and humanitarian concerns have been trumped by concerns for domestic energy security and targets for biofuel use have increased [Bozzini 2012]. The EU, by contrast, has responded by reconsidering its targets and imposing additional sustainability criteria on biofuels [*ibidem*]. Importantly though, targets do remain.

As Carrosio [2012] explains, the negative side-effects of biofuel production are justified by proponents with appeals to a higher-order sustainability issue; in this case, the urgency of responding to anthropogenic climate change. This produces, he argues, a “state of exception” in which prospects for sustainability are undermined by the very means through which they are pursued. However, driven by a massive mobilization of corporate capital, the global expansion of biofuel production has been normalized and stabilized – the exception has become the norm. In time, the state of exception accorded biofuels will be proven, at best, a temporary fix and, at worst, a catastrophic mistake. Biofuel proponents will disagree, of course, that a state of exception exists. Indeed, the argument could be made that it is only ever possible to determine whether a particular attempt to speak for sustainability and thence set it to work has been successful in retrospect. There is considerable evidence, however, that we do not have the luxury of evaluating sustainability claims in retrospect. There are also far too many examples of environmentally dangerous activities being justified on the basis that “insufficient information” is available to determine the level of risk; perverting the precautionary principle into calls to protect economic growth from potentially unnecessary “green tape.”

Evaluating attempts to speak for sustainability in prospect requires a reference point that is increasingly provided by sustainability criteria embedded within “best-practice” standards. Standards act as a shorthand way to capture both current knowledge and political consensus regarding the identification and implementation of “reasonable” measures to protect environments, safeguard human rights, minimize risks,

monitor performance etc. Standards facilitate economic activity by reducing compliance costs for businesses undertaking routine activities and, in principle, facilitate accountability and critique by providing for transparent and uniform communication. The importance of standards as de facto measures of sustainability has seen them become focal points for resistance and critique, on the one hand, and for the construction of new socio-ecological possibilities, on the other. Returning to biofuels, standards for sustainable production have been implemented that, according to Carrosio, perpetuate rather than transcend the state of exception they are accorded as sustainability measures; shielding the biofuel regime from its social and ecological contradictions in order to maintain its stability. Key environmental NGOs such as the Worldwide Fund for Nature, meanwhile, see in sustainable biofuel standards the opportunity to exert a positive influence on state and corporate policy. In the tourism sector, Salvatore and Maretti [2012] identify the process of developing standards as an opportunity to confront difficult questions concerning the social and ecological impacts of tourism and work towards practical strategies to address them. I will not attempt to adjudicate competing views here. The point is that standards establish two broad arenas in which to hold those who speak for sustainability to account. First, they provide reference points against which to evaluate specific activities. Second, they provide forums through which to establish, review and revise those reference points. Learning, therefore, remains critical, as does participation and deliberation.

None of this is to say that formalized standards schemes provide the only way in which we may evaluate sustainability claims in prospect. Retrospective studies may be used to build a body of knowledge regarding the potential implications of prospective projects (an approach common within social impact assessment) [Lockie *et al.* 2009]. Reference to the less tightly defined sustainability criteria embedded in the concept of sustainable development is indeed sufficient to highlight the lack of concern for social justice evinced in numerous eco-efficiency projects [Magnani 2012]. Standards, further, are necessarily limited in scope due to their application, for the most part, to activities that are highly commoditized. They do not help us resolve issues less tightly coupled to commodity circuits such as, for example, protected area management. Nevertheless, standards do provide a means through which to stipulate that non-market values be considered and given voice in the regulation of commodity circuits. In addition, participation and deliberation are crucial to maintaining this accountability. The EU's downward revision of biofuel targets, for example, was facilitated by more participatory approaches to governance than have been evident in the US [Bozzini 2012]. Participation and deliberation help to ensure that negative side-effects – particularly those that accrue at different spatial and social scales – are identified and taken seriously [Magnani 2012]. Participation and deliberation

also help to avoid the failure of sustainability projects that flounder because they are implemented without understanding how people will respond to or interact with them [*ibidem*].

Conclusion

Sustainability is more than a signifier of desirable social-ecological states. It is an assemblage of ideas, techniques, institutions, production and consumption practices, ecosystem processes, energy cycles and so on through which we attempt to apprehend the world in which we live – to understand the state of that world, to envisage its futures, and to direct the unruly interactions of species, substances and energies that comprise it. Sustainability is a social construct, certainly, but it is a construct that is both symbolic and material. It mediates – shaping and re-shaping – our cognitive, emotional and corporeal relationships with external nature and fellow humans. Its influence is recursive and, therefore, both within and beyond our control. In grasping towards the future, sustainability demands that we supplement principles of intra- and inter-generational equity with commitments to learning, deliberation and accountability.

Much sociological work on sustainability – including that represented in this special edition – can be described as an attempt to hold those who speak for sustainability to account. Where projects undertaken in the name of sustainability have generated (perhaps unintended) negative impacts, sociologists have documented these impacts; shining a spotlight on those who seek to legitimate social injustice and/or long-term ecological damage on the basis of short-term environmental imperatives. Sociologists, similarly, have highlighted the social exclusions and injustices produced by eco-efficiency projects that simply “black box”, or ignore, people, ecologies and values that lie outside of specific commodity circuits. And they have documented the collapse of such projects where exclusion and injustice has generated conflict and resistance.

When evaluating sustainability claims in retrospect, we stand on firm ground. But sociologists have also been active in holding sustainability claims to account in prospect. In this latter case the foundation for critical assessment is provided by comparative analysis with sustainability projects undertaken elsewhere, accordance with general principles of sustainable development, and compliance with activity-specific sustainability standards. These foundations, these reference points, provide opportunities for learning and deliberation, but they are also vulnerable to challenge from those who seek, in speaking for sustainability, to contain it. Power must always be

confronted. Anticipating and assembling future social-ecological possibilities does not require us to go beyond critique as suggested by Latour [2011]. It requires us to intensify and to extend critique, but to do so in a manner that supports social learning and deliberation, empowering constituencies for sustainability beyond the commodity circuits of “big capital”.

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Sustainability and a Sociology of Monsters

Abstract: Sustainability is constructed both symbolically and materially. It mediates human relationships with external nature and, in so doing, escapes human control; transforming people, ecosystems and economies. Beyond principles of intra- and inter-generational equity, sustainability demands learning, deliberation and accountability. Sustainability offers sociologists a unique opportunity to contribute to decision-making forums from which we may otherwise have been excluded. Our research has highlighted numerous ways in which those who ostensibly speak on behalf of sustainability do so in ways that seek to contain it. The market-based focus, in particular, of eco-efficiency initiatives has attracted critique for its “black boxing” of people, ecologies and values that lie outside privileged commodity circuits. The foundations provided by sustainability principles and standards have thus become essential reference points for those seeking to ensure that non-market values are considered and given voice in the regulation of commodity circuits. Anticipating and assembling future social-ecological possibilities requires us to intensify and to extend critique in a manner that supports social learning and deliberation, empowering constituencies for sustainability beyond the commodity circuits of “big capital.”

Keywords: Actor-network theory, environmental sociology, sustainability.

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