ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/331933895

Social sustainability indicators as performance

Article *in* Geoforum · March 2019

DOI: 10.1016/j.geoforum.2019.03.008

CITATIONS
0

4 authors, including:

James Hale
University of Otago

11 PUBLICATIONS **299** CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

GROWING DIVERSE CO-OPERATIVE NETWORKS?: AN EXAMINATION OF BOUNDARIES AND OPENINGS TO RESILIENT FOOD FUTURES View project

All content following this page was uploaded by James Hale on 21 March 2019.

The user has requested enhancement of the downloaded file.

Title: Social sustainability indicators as performance

Corresponding and lead author:
James Hale, PhD
Research Associate, Colorado State University
Research Affiliate, University of Otago
Email: jameswhalephd@gmail.com

Co-authors:
Katharine Legun, PhD
Centre for Sustainability and Sociology, Gender and Social Work
University of Otago
Email: katharine.legun@otago.ac.nz

Hugh Campbell, PhD
Centre for Sustainability and Sociology, Gender and Social Work
University of Otago
Email: hugh.campbell@otago.ac.nz

Michael Carolan, PhD
Department of Sociology
Colorado State University
Email: michael.carolan@colostate.edu

Journal: Geoforum

Date Accepted: March 14, 2019

Link to Publisher Version: https://doi.org/10.1016/j.geoforum.2019.03.008

Abstract
We are living in an era of the audit. Sustainability indicators are used to ensure that industries are behaving responsibly. The audits are well elaborated in their environmental requirements, but they are often less directly engaged with issues of social sustainability. Should they be? After describing a number of challenges with measuring social sustainability, this paper defends representing social sustainability through indicators by taking a performative orientation toward them. Here, we suggest holding a relationally real analytical stance about what contributes to more equitable and diverse assembling processes. In iteratively doing so, we can work to determine indicators that are less focused upon the practices they are meant to represent, and more on their potential impact on intended audiences. In other words, this takes up the suggestion that indicators are themselves agents and then takes this a couple of steps further by arguing for the potential work social scientists can do using indicators to move toward better futures. We ground this theorizing in two short vignettes taken from the authors' work in food and agriculture cooperatives and also in a fruit industry.

Keywords: Social sustainability, indicators, relational realism, performance, development

Acknowledgements
The authors would like to acknowledge the help of our research participants in coming to understand social sustainability as performance. We also want to thank those who provided feedback on the initial steps of this work at the XXIV Agri-Food Research Network conference in Bandung, Indonesia. This research was supported by the National Institute of Food and Agriculture (NIFA-COL00725), the National Research Foundation of Korea (NRF-2016A3A2924243), and New Zealand's Ministry of Business, Innovation & Employment (contract AGRB1201).

1: Introduction

Indicators are representational. For example, the economy is not GDP. It is much more than that. However, as an indicator of economic wellbeing, GDP is meant to represent something about the economy that is meaningful and practically useful. Decisions and practices are based upon this portrayal of the economy, such that the form that the information takes implies a particular kind of outcome. In other words, indicators themselves have impact. In this way, they are not only representational but they are also ways of making sense of and responding to the situations we find ourselves in, which in turn enact worlds. This begs the question – what kind of world do we want to create?

This paper focuses on the potential benefits of viewing indicators, especially social indicators, as performative – acting on and toward particular worlds through symbolic representation. Put another way, we are interested in the way that all indicators are performative and how they perform toward particular ends. Further, and to varying degrees, taking a performative position pushes us to reflect upon the assumptions made about what indicators are meant to perform toward and use this to make more thoughtful decisions about indicators, their design, and their revision.

Reflexivity around what indicators may do is a central theme of this paper. Specifically, we wrestle with some of the theoretical and methodological challenges of "social sustainability" indicators in food, agriculture, and environmental governance. This requires us to move a couple of steps beyond the usual discussion of the 'problems' of indicators – particularly where indicators are seen as instrumentally fallible measures of reality, or attempts, in the context of sustainability assessments to 'measure the unmeasureable' (Bell and Morse 2012). We argue that while indicators most certainly are problematic in the various pragmatic and instrumental ways that Bell and Morse describe, the development, deployment, and study of indicators is not simply technical, it is *performative.*

When we take this performative approach, we argue, we can adopt a relationally real orientation toward the causes and conditions shaping outcomes. When considering social structures, we understand "relational realism" as referring to the enduring yet alterable symbolic tendencies that work to constitute the gravity of situations (e.g. knowledge, meaning, and identity) (Carolan and Stuart 2016). When developing indicators to examine relationally real social processes and potentials, a degree of anticipation is needed to help detect what may be underlying and/or adjacent but still constitutive to a particular network.

This paper also aims to engage and generate insights into the politics of performativity in social indicators, by suggesting a weak and processual theoretical orientation (Wright 2015) toward that which inhibits and contributes to making diverse assemblages more equitable and just. "Assemblages" are collections of relations between heterogeneous entities, human and non-human, working together for some time (Muller and Schurr 2016). Those entities often have co-dependent agencies within a sphere of activity, meaning their role within an assemblage is defined by others involved. Equity in assemblages is the result of symbolic and material power not being overly concentrated in any particular entity or network, thereby creating relationships that limit the assemblage's "social sustainability" and overall assemblage diversity (more on this later). As a result, we advocate using a performative approach to consider how indicators, in practice, can destabilize the kinds of performances and practices which are shown to limit diverse and equitable outcomes. For example, racism, sexism, and

classism occur through particular performances and practices and these set conditions for future relations. Through two anonymized cases including a fruit industry and a number of food cooperatives, we show the use of performative social sustainability indicators within individual, relational, and institutional narratives.

2: Representing Social Sustainability

Social sustainability indicators are contentious. The problematic nature of social indicators can be seen from both a constructivist and political economic critique. Constructivists emphasize the multiplicity of truths and the rich, context-dependent nature of social life, generally criticizing the simplicity of measures for the harm they can do to communities by ignoring more dynamic experiences of reality. A political economist might consider how measures of sustainability allow for industries to capture the most marketable aspects of production while obscuring others, and enabling industries and consumers to encourage practices through incentives when these practices should really be required of all producers.

As a way to tease out such tensions, we first describe the debate around the definition of social sustainability. What is "social" in this context? What is meant by "sustainability"? How are these related to one another? Second, we discuss challenges to practicality: whether indicators will be acceptable to other research collaborators and end users. Thirdly, and most significantly, we address the ontological and epistemological footing of social sustainability indicators, and we consider whether social sustainability should be separate from other "pillars"—environmental, economic—in the first place. Lastly, we consider how the reduction of the world to indicators can be seen as problematic.

2.1: What is "social sustainability"?

Social sustainability can be a challenging notion to define and apply. Indeed, Vallance, Perkins and Dixon suggest it is "a concept in chaos" (2011:342). As a result, there have been many attempts to summarize the varying approaches to social sustainability indicators. For example, indicators have been organized under the broad categorical concerns of well-being, values, agency, inequality, and power and justice (Hicks et al. 2016). Such approaches can be further organized into three general orientations to social sustainability: 1) instrumentalist *bridge sustainability* concerned with behavior change to achieve bio-physical environmental goals, 2) *maintenance sustainability*, which hones in on the preservation of socio-cultural patterns and practices when surrounded by social and economic change, and 3) value focused *development sustainability* that aims to address poverty and inequity by attending to issues of injustice (Vallance, Perkins, and Dixon 2011).

Each of these types of approaches comes with a critique. Efforts that focus on behavior change, resembling bridge sustainability, have been problematized for being top down; overvaluing expert, techno-scientific knowledge; and not dealing well with issues of power and inequality (Agyeman, Bullard, and Evans 2003). Maintenance sustainability also does not deal well with how one group's deterioration may be caused by another's maintenance. Increasing attention has been placed on to the co-constructing nature of maintenance and development social sustainability (Åhman 2013) which implicitly undermines any attempt to elevate development sustainability as a primary goal. "It is at the intersection of changing and maintaining society that social sustainability can be realized" (Åhman 2013, p. 1162). We posit

that this intersection can become a site of more diverse and equitable 'assemblying,' whereby the ways society is changed and maintained, and the qualities of that process, represent a level of sustainability (more on this later). In short, we argue that development sustainability – with its focus upon justice and fairness – is a necessary precondition for equitable maintenance and bridging social sustainability outcomes.

2.2: How does social sustainability work?

Beyond these differences in conceptualizing social sustainability, there is the pragmatic challenge of whether research collaborators and end users will accept and engage with selected indicators (Turnhout 2009). The development sustainability orientation described above may at least appear to be at odds with disciplinary or sectoral assumptions and imperatives. That is, academic disciplines that prize observable, robust, publishable outcomes, and industries that look for quickly communicable assurances and marketable outcomes can find process and justice oriented approaches challenging. Powerful actors and narratives often win out in the selection process, resulting in a truncated selection of the least threatening or 'unpolitical' elements of social life. Rather than simply measuring the unmeasureable, these kinds of political contests and practices might be argued to simply measure the acceptable, and in many cases, the 'acceptable' voids the 'social'.

For instance, specific practices of individual farmers often become the focus, rendering the social as something that must be governed – the role of social sustainability indicators is to change practice from the top down or to mitigate risk. Others, like those that are listed in the United Nations' Sustainable Development Goals or as part of Global Gap's new social module, are largely presented as a list of goals that are achieved through clear, binary assurances: workers are either being enslaved or they are not. There is no gradient scale supporting the degrees to which industries are facilitating the liberation and wellbeing of all those involved in production beyond, for example, simply mandating workers be allowed to collectively bargain and earn the minimum wage. This results in indicators that fail to wrestle with the conditions and relationships that shape farm life. Such forces include collective goals, values, and social processes that contribute to inequitable outcomes, from racism to sexism, xenophobia, classism, and other social processes that limit equality and justice. As will be explored in more detail later, with such processes in mind we suggest that taking pragmatic and sometimes disruptive stances toward developing and implementing indicators can help researchers play a more enactive role in social change (Law and Urry 2004).

2.3: Social sustainability as a pillar

The ontological politics of separating out the social realm as distinct from the economic and environmental has also been problematized (Gibson 2006). Each of these do not occur in a vacuum separate from each other, but are interrelated and, when they are made into indicators and measures, can come into conflict. For example, reduced pesticide use or the use of organic compounds in conventional farming systems can increase the intensity of labour requirements, and if a farm is getting rewarded for environmental practices but its labour practices are ignored, the effects may incentivize increased labour exploitation. On the other hand, if there is a way to recognize and support combined environmental and social potential benefits of reduced pesticide use—less worker exposure to pesticides, less pesticide drift, increased use of

integrated pest management strategies with labour upskilling, and reduced agro-chemical residues in the farm ecosystem—there may be less friction in sustainability projects. The distinction between the three forms of sustainability is often the result of disciplinary boundaries made evident as groups work together and need to fit language and practice into narratives of sustainability.

Moreover, the pillar approach in sustainability projects can exacerbate inequities between different actors. The orienting question - "sustainable for whom?" - is the primary elephant in the room during discussions of social sustainability. Who is expected to change behavior? What socio-cultural patterns should be preserved? When discussions of power and inequity come up, it can be easier to bury these away and focus on the other pillars – environment and the economy. Reifying the environment, the economy, and the social into separate ontological silos masks how these are often overlapping, co-constructed, and experienced differently in local experience (Boyer et al. 2016). As the examples above highlight, one's economic issue might be experienced environmentally and/or socially by another. Consequently, pillar approaches fail to deal with complex and multi-faceted problems. Further, if social sustainability is limited to implementing behavior change imperatives, then civic engagement, and the varying social ontologies therein, becomes further depoliticized.

Social sustainability is often problematic for formal systems of agri-environmental governance because it is deemed to be important (particularly in terms of 'Triple Bottom Line' approaches) but then proves to be very hard to stabilise into useable objects and categories of social life in actual audit schemes. This is due to the often relational, processual, and conditional qualities that determine particular social unfoldings. One result of the attempts to stabilise social sustainability indicators is that a small number of 'domesticated proxies' (like worker welfare) are included while much of the rest of the social world lies outside the scope of the audit. The result is a set of 'domesticated' and relatively politically inert indicators that, at best, don't perform much useful work in AEG audits or, at worst, actually constrain and conceal pathways toward more equitable and just social worlds.

2.4: Reduction and indicators of social sustainability

Indicators are also problematized for being reductive, which is to say they are not what they represent. As others have illustrated, maps do not constitute territories (Bateson 1972). Yet, they are useful in navigation. Ultimately, all signifiers are reductive. If we were to reject out of hand any representational form that does not accurately capture what "is" we could not talk, or think. The best we can do is to be reflexive, making sure to construct these representations iteratively, guided by the spirit of inclusivity.

Like maps, language and other signifiers such as indicators do not consist of the objects they denote. This means that what is missed in reductions can create distortions and unintended consequences. Constructivists have emphasized the social construction of "truth" (e.g. "territory" or different understandings of "social sustainability"). From this point of view, the act of reduction is easily shaped by power (Foucault 1982) or symbolic violence (Bourdieu 1987). Indeed, as other have demonstrated, indicators themselves are agents (Rosin, Campbell, and Reid 2017; Rosin et al 2017) and who or what gets to determine their parameters and qualities can limit possibilities.

This problematic nature of reduction ties in to a political economic critique of social sustainability indicators: the simplification of complex social realities into shorthand symbols for the purposes of easy communication allows for abstract forms of governance, historically of a more top-down regulatory kind, but increasingly as a consumer and market-driven kind. If we were to create a metric for social sustainability, involving some measures of worker wellbeing, industry equity, and engaged and positive relationships with external communities, it would facilitate the quick evaluation of a business without actually having any knowledge or contact with that business. While supposedly accounting for the social sustainability of an industry, business, or farm, indicators themselves may be participating in a process of abstraction and alienation that is, in itself, not particularly socially sustainable.

Despite all the above-mentioned challenges associated with social sustainability indicators, we argue that representation is a fundamental human process necessary for communication and democratic decision-making, and a foundation of the scientific processes. Derailing opportunities to shape social outcomes because of its inherent social construction and/or potential cooptation by political-economic processes fails to acknowledge how this critique itself makes assumptions about what to represent (or not) about what exists (or not). In other words, in avoiding the specification of social sustainability indicators because of their potential impact, we are concerned such approaches may too often serve those willing to stabilize indicators to the benefit of already powerful actors, and the detriment of others.

As we suggest in the next section, when social scientists work to determine the equality and diversity of social relations it is important to acknowledge what we assume exists, something that can still be very relational and enactive in situated institutional practice. Moreover, we are assuming that people are not currently drawing on existing symbols to evaluate the social aspects of a business or industry, be it the simple picture of a farm on the front of a cereal box or assumptions made about the social integrity of production based on the location of production. By remaining passive, and pretending that we are merely “describing” or “analyzing” the world, science works to reproduce the status quo to the benefit of some and marginalization of others. If we, as social scientists, consider ourselves as actors in an existing set of relations, we may consider how to best disrupt the existing set of symbols and relationships that may be unproductive and obfuscating important conversations. Taking a relationally real approach can aid us in focusing those efforts of disruption.

3: Relational Realism and the Performance of Social Sustainability

In this section, we suggest that a relationally real orientation toward developing and deploying social sustainability indicators can help disrupt social rigidity and inertia, and thereby potentially improve social sustainability efforts. In short, because of the performative quality of research (Gibson-Graham 2008; Law and Urry 2004) and the analytical use in acknowledging the presence of relationally real social structures in human-environment unfoldings (Carolan and Stuart 2016), indicators should be viewed as performative processes of acting toward and on particular worlds. We believe that taking a relationally real position toward the causes of inequitable assembling processes, combined with a performative approach, helps address the challenges raised above.

Performative research agendas often aim to “open up possibilities” by rejecting a structural, realist approach to social explanation (Gibson-Graham 2008). That is, rather than

focusing on social patterns at a more abstract level, and based on measures that hinge on an unacknowledged normative reading of reality, a performative approach considers how people create the world around them, and create normative realities through actions that reinforce them.

The economy is not GDP – it is enacted in situated practices that are more heterogeneous than something like GDP depicts, and those enactments give GDP its social currency. Indicators like GDP are *ontic* in nature ("ontic" refers to aspects of reality taken as unproblematic and objectively given). This quality can be seen throughout agrifood worlds, as evidenced by corporations' obsession with audits and evaluations (see e.g., Campbell, Murcott, and MacKenzie 2011; Hatanaka, Bain, and Busch 2005). Generally, an indicator can be considered ontic when "it" ends up substituting for the goal—think, again, of how measurements like GDP have come to substitute for individual, household, community, and national wellbeing (Busch 2016). Foucault (1980) referred to this black boxing of imaginaries as the *dispositive* (or assemblage): an outlook made "natural" by the strategic arrangement of experts, capital, and historical inertia. Conversely, *ontological* questions seek to make those representations—those "its"—amendable to multiple worlds while also helping to ensure measurements are not confused for ends.

The performative effects of indicators has been critically explored by social scientists in other arenas, including ecology, where indicators and systems thinking have been seen to create a mechanical, and overly anthropocentric version of nature (Stanley 1995; Jelinski 2005; see also Turnhout 2018). Others have framed the mechanistic measures of "ecosystem services" to produce an ecological world exploitable by capitalism in a new way (Robertson 2012; see also Turnhout, Neves, and De Lijster 2014). As with the example of GDP, ways of measuring the economy certainly influences its character and enactment, and this has been a profound and fruitful arena of work in sociology. Not least of all, Weber's seminal work in *Economy and Society* and *the Protestant Ethic and Spirit of Capitalism*, showed how systems of measurement did not reflect and document the natural functioning of economic life, but performed our rationalized capitalist system into reality. Since, there has been significant work on the performativity of markets (see particularly Çalışkan and Callon 2010; Callon 2006; Cochoy, Giraudeau, and McFall 2010). This work has largely considered how economic actors are performative in the production of economic realities. This paper suggests that we take that position further, and use it assertively within our own research.

By acknowledging the importance of performance, academics are better able to grapple with the impact of their own research and ways of describing the world. For instance, some have studied how urban agriculture projects are not only acts of neoliberalism as is commonly described in critical social science literature, but also experiments in diverse economic relations of which research helps construct (Carolan and Hale 2016). Taking on a performative approach to research, the focus becomes, "what kind of world do we want to participate in building?" (Gibson-Graham 2008:615). This provides epistemological footing for recognizing that indicators have impact and we ought to be thoughtful about the work they do.

However, rather than rejecting realism as inherently essentialist, when viewed through a relational lens, social "structures" can denote the enduring yet mutable symbolic tendencies that give situations weight – including those in science (e.g. knowledge and meaning) and

everyday life (e.g. identity). Relational realism argues that efficacious and afficacious[1] processes and potentials can exist even when they are not active or enactive (Carolan and Stuart 2016). These structures are not void of situated practice. Practices are constitutional. For example, white supremacy is a relationally real social structure enacted in practice and through narratives, even if agents may not understand it as such. What does this mean for developing and implementing indicators that aim for more equitable and diverse assembling processes? By acknowledging that researchers knowingly or unknowingly make analytical assumptions about what "exists" (relationally real structures) and reflecting upon our own positionality, we can better perform toward the worlds we seek to create.

3.1: Anticipating Relationally Real Structures of Inequality

As described in the previous section (section 2), we argue that social indicators should work to address issues of inequality and justice. Developmental goals are preconditions for adequate outcomes in terms of maintenance and bridging processes – bridging social sustainability is susceptible to elitist managerialism (i.e. whose sustainability knowledge counts?) whereas maintenance social sustainability can appear unrelational in practice (i.e. one group's sustainability can be reliant on another's degradation). To measure equity and justice, a degree of objectification (e.g. recognition of particular groups) must occur because inequality is also relationally reproduced symbolically (Bourdieu 1987).

We understand relational inequality as the outcomes and conditions of practices over time and space working to distribute symbolic, positional, material, and emotional resources in ways that disproportionately advantage particular social groups (e.g. race, class, gender, nationality, religion, urban/rural) through associated performances (adapted from Grove and Pugh 2015). This stands opposed to how inequality is more conventionally understood which emphasizes individual level outcomes rather than also including the often relational conditions which determine it, and provide a means of changing outcomes. Our definition highlights the more structural aspects of social life that relate to inequality. These could include, for example, patriarchy, white supremacy, neo-colonialisms, classisms, and neoliberalism. These are extended cases (Burawoy 1998) developed through social research and theory. One way the structure of white supremacy is performed, for instance, is by rhetorically equalizing the conditions, capabilities, and opportunities both white and non-white people face. The outcome of white supremacy (e.g. unfair advantage, oppression, etc) is justified through such ideological maneuvers (e.g. the conditions are fair). As white researchers, or participants who may not detect such patterns without being tuned to them, it is important to anticipate their potential presence, albeit unnamed or felt by those that are white.

In an effort to disrupt the assumptions in how such structures are constructed, some constructivist approaches may argue that we need to focus on the realities described by our participants. For some forms of research, this may be wholly appropriate, but may also result in a lack of detection of inequitable social structures, and the causes enacted therein. By presenting research as purely descriptive or co-constructed with research participates, such projects are less explicit about how socially laden categories inform research (e.g. theoretical tools, indicators, structures of justification). For example, since white supremacy (or some

[1] We take "afficacious" to mean the capability of making something affectively felt or recognized.

aspect of it) is not described as important by interviewees, it might be assumed to be unimportant and disregarded as a threat to social sustainability in a particular context. Or narratives that support white supremacy may not be probed if the researcher is not sensitized to the concepts and related performances. In short, what you learn often depends on who your participants are, who the researcher is, the way the research is framed and conducted, and how politicized the topic may be. Though a relational structure may not appear active does not mean it is absent from a particular assemblage and it's conditions and outcomes for particular groups. To be able to detect the possible presence of such structures, a degree of anticipation is often needed.

Relational realism helps provide an ontological orientation toward anticipating and representing inequalities through the development of indicators and measures. The meanings and relationships that shape engagement with measures also become a primary concern about what is enacted by the indicators. For instance, depending on the reception of concepts, we might not be able to ask directly about racism (e.g. "are you racist?). But we may be able to ask about whether there are procedures for all workers, regardless of race, gender, class, etc., to make work related complaints and how comfortable people feel doing so. We might also be able to ask about whether there are physical and social spaces for people to build trust across different social positions.

Returning to the varying forms of social sustainability suggested by Vallance et al (2011), Table 1 generally characterizes how such performative indicators might look for individual, relational, and institutional aspects of agri-environmental schemes. The selection of such units of analysis come from our time with the sustainability literature and experience in the field (more on this later). These are by no means meant to be exhaustive but aim to further outline different ways to represent and detect social sustainability using those suggested in the literature with a relationally real, performative twist.

Table 1: Examples of social sustainability indicators

	Individual	Relational	Institutional
Bridge Social Sustainability: Behaviour change toward environmental goals	• Adoption of sustainable environmental practice (e.g. fallowing land, biodiversity)	• Farmer trust of industry, academia, and urban populations (e.g. how much do you trust the following?)	• Civic engagement with people from industry, academia, and urban settings (e.g. farmers involved in decision making processes with industry, academia, urban groups).
Maintenance Social Sustainability: Preserving socio-cultural patterns and practices	• Increased farmer income • Improved worker welfare (e.g. wages, benefits, work hours)	• Trust among farmers and community (e.g. how much do you trust other farmers? Others in community?)	• Civic engagement among farmers and community (e.g. are farmers working with other farmers and community members to make decisions?)
Development Social Sustainability: Reduce poverty, inequity, and address injustice	• Increased income for all groups regardless of SES. (e.g. age, sex, ethnicity, religion, class)	• Trust across all within society (e.g. age, sex, ethnicity, religion, class)	• Civic engagement with people across society (i.e. age, sex, ethnicity, relation, class) (e.g. are all SES involved in the decision making process?).

3.2: Assembling Performative Social Sustainability

Assemblage thinking helps inform the way we see the impact and representational process of social sustainability indicators, by looking at the socio-material elements of practice that give an enduring structure to relationships. We understand assemblages as collections of relations

between heterogeneous entities working together for some time (Muller and Schurr 2016). The emphasis is on fluidity, vitality, and the affective. This approach is often used to decenter a stable view of entities that tends to be found in social research (e.g. state, economy). Yet, instead of using this approach to describe and highlight the difference of particular cases, we use its underlying assumption – relations between heterogeneous entities – as a guide for what social sustainability indicators ought to encourage. To distinguish this analytical orientation from bridge, maintenance, and development social sustainability described above, we have provided a few examples of assembling social sustainability indicators in Table 2. These have also been informed by the ongoing research described in the vignettes.

Table 2: Examples of performative social sustainability indicators

	Individual	Relational	Institutional
Performative Social Sustainability: Encouraging fair relations across difference	• Openness to different people, ideas, and experience (e.g. if you are working with people different than you, how open are you to their ideas?) • Sceptical of social hierarchies (e.g. how important are traditional family and gender values to you?) • Breadth of view spatially and temporally orientation (e.g. how do you view your farm as relating to the future? To other places?)	• Humility and lack of sense of entitlements (e.g. do leaders display/feel sense of entitlement? Or more community oriented?) • Deference and recognition of achievements • Capacity for discomfort (e.g. interactions which support expression of difference) • Fair distribution emotional work (e.g. are there any groups which experience more frustration or anger?)	• Policies, procedures, and resource allocation which encourage civic engagement. • Creation of social space to express difference - facilitation skills, cultural competency trainings, civic trainings. • Interactional space (physical or online) for civic engagement to be carried out.

Aspiring to cultivate potentials for sustained expressions of, and relations across, difference, we argue that social sustainability efforts can escape the domesticating quality of many indicators and actually better encourage what needs to be changed and maintained, and how. These aims, performatively stabilized in the ongoing process of developing and editing social sustainability indicators, can focus upon realizing the potential of the social, moving beyond triple-bottom line and pillar narratives of what 'it' is and into the wilder terrain of how 'it' assembles. In doing so, it forces an ontological shift from the 'fixed social' as a thing into the 'generative social' as enactive process in which researchers are implicated. We now turn to two brief and anonymized vignettes drawn from across the foodscape that help illustrate our experiences with developing and enacting this performative orientation toward social sustainability indicators.

4: A Note on Methods

To further root the performance of social sustainability indicators, we draw on cases from two separate research projects. The first case includes research enacted by the first and fourth author in the Rocky Mountain region of the United States. This research focused upon the socio-cultural aspects of cooperative organizing in food and agriculture cooperatives. We conducted interviews (n = 59) and focus groups (n = 6) and spent more than 200 hours as participant observers over an 18-month period.

The second case comes out of an interdisciplinary and cross-sectoral research project in an Australasia context. The focus of this research is to provide tools that enable transitions to more sustainable practices in agriculture and natural resource industries. The second and third

authors have been active as social scientists in this project for five years. The first author became involved in the final year and a half of the project. During this time, interviews were collected with research partners (n = 8) and industry representatives (n = 18). Participation was ongoing in the form of regular research team meetings where indicators were discussed and revised, as well as fieldwork done over a one week period in early 2018. This work focused upon the socio-cultural aspects of sustainable agriculture transitions.

We draw on our experience within these two research projects to describe the development, use in, and deployment of, performative social sustainability indicators. As part of our performative approach in both of these cases, we did not isolate our participation to that of supplying indicators and disengaging the remainder of the time. The research, and therefore indicator selection and revisions, are more accurately viewed as iterative. This included reviewing relevant literature, anticipating relationally real determinants of inequality, and regular meetings and participation in our cases to get feedback on the indicators. Sometimes this was done passively. For example, if conversations suggested that there was a tendency to view indicators through the lens of bridge and maintenance social sustainability – through farmer income or adoption of environmentally sustainable practice – this was noted and then discussed within the social science research team. Other times our tactics were more direct. For example, we sometimes presented or intervened in discussion to describe other forms of social sustainability that arose through our iterative analysis (e.g. relational and institutional forms). We also wrote reports for community and research partners in ways that, based upon our research, anticipated their dispositions to social sustainability and sought to enact forms that may have been missing, especially as it related to development and performative social sustainability (see Tables 1 & 2). In this way, our research participation, and the selection and revision of indicators, can be viewed as oscillating from passive to disruptive. This enabled us to test and revise performances in enacting diverse and equitable assemblages.

5: Assembling More Cooperative Co-operatives

Beginning with a general interest in innovative food and agriculture projects in the Rocky Mountain region of the USA, the first and fourth authors interviewed people across the spectrum – industry, politicians, farmers, activists, consumers, and policymakers. We learned that there was a renewed interest in food and agriculture cooperatives. For example, four were working to form in the region's magnet city and upward of nine rural producer cooperatives have formed in the past 10 years. We began following four of these cooperative efforts and generally wanted to learn about struggles and successes they experienced with an eye toward socio-cultural drivers of inequality. This included, for example, barriers to relational and institutional aspects of development social sustainability such as the lack of social spaces that facilitate the expression of difference and unfair distribution of emotional work. Some of this work has been published elsewhere (Hale and Carolan 2018a; 2018b).

In an initial focus group, a research participant described that there is a difference between "cooperative" the *adjective* and "cooperative" the *noun* – essentially implying the relational and institutional qualities of cooperative performance. He explained that leadership may not build and sustain connections, that cooperatives can be exclusive, and that partnerships can sometimes look more competitive. In short, the question becomes "cooperative" for whom? And what? Such themes suggest the presence of tensions around

developmental social sustainability concerns in the cooperatives and the performance of how it should be encouraged.

Upon returning to the literature, we found a definition of cooperation that anticipated some of the developmental social sustainability concerns which make cooperation easier for some to the detriment of others (Rothschild 2016), potentially limiting diverse and equitable cooperative assembling. Rothschild argued that cooperation must include substantive values and practices such as ongoing participation, resisting hierarchies of authority, valuing and sharing diverse knowledge, and personal and egalitarian relationships that are free of the capitalist culture of instrumental relationships. These values and practices are more closely aligned with development social sustainability – cooperation is not assumed in the legal form – it is enacted in practices, often relational and institutional in form.

To understand how these were enacted or not, and orient our performance toward them, we spent time observing and participating in board meetings and community events and interviewing people involved in the cooperatives. We learned that decision-making processes, leadership performances, and the organization of emotional work impacts upon who can participate in cooperatives and the roles they often occupy, thereby suggesting that these are important indicators of social sustainability. In sum, decision-making is often expedited by creating exclusive institutional spaces through instrumental relationships (e.g. grants and budget imperatives) and whether the group's trust building privileges similarity over difference (Hale and Carolan 2018a). Leadership can struggle to be reflective of some groups (e.g. white men leading organizations working in Hispanic/Latino neighborhoods), particularly for identities lacking the cultural repertoires to navigate funding and policy circles. This creates challenges to the adequate expression of humility and capacity for discomfort (e.g. relational qualities of performative social sustainability). Cooperatives also struggle to fairly divide emotional work amongst members – some end up carrying burdens for others. For example, staff of a grocery co-op felt they had to consistently act helpful and caring to compete with larger stores, even as they took pay cuts, unbeknownst to most consumer members.

Moving iteratively between the literature and the field, these findings reflect an ongoing process of identifying possible indicators for more equitable and diverse cooperative assembling, which would be essential to their social sustainability. Adequate representation of all member classes on the board of directors, and relational and institutional spaces for these to be achieved, for example, was used to assess and stimulate conversations with a rural co-op governed by farmers. The co-op was struggling to become financially sustainable and we sometimes suggested that the board develop policies and practices that support developing a broader board membership amongst consumer members who have access to other network resources. This included having meetings be more physically accessible to consumer members and regular recruitment activities. Such participation helped us further contextualize how indicators of social sustainability – in this example connections across difference – are effective or ineffective in performing toward developmental concerns.

For example, when asked why they didn't have more urban consumer members on the board of director (there were next to none), some would describe not wanting to lose the producer voice. Yet, after digging deeper, we learned that the co-op board meetings were more of a comfortable space for producers to connect with each other. Having urban members present was seen as a potential threat to this and would create discomfort. From a

development social sustainability perspective, this can be viewed as resulting in an exclusive space that may maintain social support between rural farmers for now. But, without considering how this exclusivity closes off connections to urban networks (e.g. excluding urban consumer members), we can also understand this co-op as less socially sustainable and uncooperative for urban members and those that may not identify with the culture of the board. After writing and sharing a community report of these findings with participants, conversations and observations suggest more events and activities have begun occurring to recruit more consumer member participation. In this sense, the report, and indicators described therein and beyond, were performative tools for intervening in the cooperatives in ways that encourage social sustainability. Enacting indicators aiming to connect across such socio-cultural networks (e.g. urban to rural) is an example of how we performed heterogenous connections, potentially generating benefits across the cooperative cases.

Another case provides us with an example of how we iteratively learned about the ways in which groups are able to relate across difference, and how this may be indicative of relational and developmental aspects of social sustainability. This urban grocery store co-op struggled to have leadership reflective of target communities, and sometimes was viewed as being insensitive to how they were reproducing hierarchies. However, by developing a more socio-culturally diverse board and space for vocalization of difference, the group was able to begin working through some recent challenges with U.S. immigration, something that was potentially impeding the co-op's development. In the wake of Donald Trump's election, Hispanic and Latina board members were much more concerned with racism and prospects of deportation than working on the co-op. The two could not be separated for them. How would they even be a part of the co-op if they are not around to shop and/or work there? The leadership of the co-op were advised by Hispanic and Latina board members to spend time sitting and discussing these concerns and feelings, rather than the typical agenda outlined for the co-op board. Enacting this required a degree humility on the part of the leadership who may have had different concerns at the time. The leadership was working toward more developmental goals through performative indicators (e.g. show humility, working to share emotional work). Following these discussions board members described the co-op's leadership as becoming more actively involved as citizens in causes seeking to address the challenges of immigration and racism. Having the space to express different experiences was vital to this, as well as the indicators co-op participants used to implicitly and sometimes explicitly assess priorities in achieving co-operative development. These concerns are reflective of an underlying orientation toward iteratively enacting institutional and relational qualities of social sustainability.

The relational concerns of performative social sustainability was particularly salient in another grocery co-op. Here, the emotional work and the interactions between staff and customers were a focal point. The co-op is competing with larger corporate stores in which customers can more easily remain anonymous with their shopping – they are used to doing little of the emotional work because this falls on corporate staff. Put another way, larger corporate stores have institutionalized uneven emotional work relations among staff and customers, thereby limiting social sustainability. In a co-op, customers are less anonymous. Staff are often expected to carry the burden of providing friendly customer service in the face of financial struggles and this can cause the performance of authentically caring to wear thin.

Gossip or frustration can be more often heard and felt by co-op customers. These dividing dynamics also contribute to the co-op struggling to have more diverse socio-cultural participation which further entrenches financial challenges. In an effort to call attention to these indications of what may be contributing to lack of social sustainability (e.g. ways for people to emote across difference), we provided feedback that this might be a priority – developing and holding social events and spaces for people to connect with staff, aiming to have a wider range of foods, and participation from socio-culturally diverse groups. There were also suggestions made that this might be aided by changing the vision, having anti-oppression trainings, and working with new networks and leaders, all potential practices which may serve in formulating and indicating social sustainability. Put another way, our performance as researchers, (e.g. providing the various forms of feedback described above), reflects an iterative development of indicators which aim to perform toward more equitable assembling outcomes.

6: Performing Toward Fair Labor in a Fruit Industry

As part of a team researching sustainability of various industries, including a fruit industry, a number of the authors were sent a media article from a research team partner reporting labour exploitation of orchard workers. We were already working to develop surveys, interviews, and other field work in ways that anticipated potential inequitable assembling outcomes and relations therein among the farmers, industry representatives, and community members (hence the article coming our way). This included, for example, considering the causes that may explain relational inequality along boundaries of race, class, gender, etcetera. As we will see, our work with this case around social sustainability highlights the importance of iterative processes in determining indicators, the value in researcher performativity in enacting social sustainability, and some ways in which we used indicators to anticipate and work toward addressing relationally real drivers of inequality.

Following a performative research orientation, we sought to disrupt the way the industry typically views social sustainability. The previous focus had been on maintenance social sustainability. For example, maintaining the farmers' broad social esteem through donations to community groups, with little consideration of the broader drivers of inequality beyond typical narratives of job creation and contributions to the local economy. Social sustainability is also often conflated with the uptake of environmentally sustainable practice (i.e. bridge social sustainability) such as whether individual farmers are adopting particular spray and irrigation regimes. This logic would seem to suggest that by picking up practices that reduce the potential suffering of your neighbours or community members vis-à-vis the environment, one is also behaving in a socially sustainable way. Such practices were also often consumer-focused, in that they were situated within an economic justification suggesting that effort to reduce environmental impact would increase market security in the face of growing environmental concern. This approach can have shortcomings if substantial change to human impacts on the environment is required (see Dauvergne, & Lister; Wanner 2015, for example). Moreover, these approaches inspire a performative version of sustainability that conflates social wellbeing with the rigour and efficacy of an environmental brand, thereby potentially more easily obscuring the relational and institutional qualities of development social sustainability. Industry concerns become about managing this brand primarily to maintain profits (Dauvergne, & Lister). By focusing too much on farmers and consumers abstractly rather than social systems that are

produced and reproduced through fruit cultivation, such as gender, race, class, and culture, unfair patterns and processes (e.g. white supremacy, sexism) may be reproduced passively by failing to consciously work towards their undoing.

The indicators and measures we created sought to push the conversation outside of the farm gate (i.e. performing toward relationally real drivers of inequality) and in the direction of development social sustainability concerns. This included a wider breadth of view such as the forms of marginalization taking place within and between farms, industry, and communities. But, when performing toward equity and addressing injustice, it was clearly necessary to navigate and negotiate the industry narratives of sustaining financial interests of farmers and the adoption of environmental practice. This required continued exchanges through email and other conversations that sometimes led us to concede the types of questions we might ask in surveys. These concessions helped build trust between the research team and industry, as well as improved the practical application of measures. For example, in a survey gauging sustainability practice we wanted to ask about gender identification using "male", "female", and "other" to determine whether there were any differences across these groups. We received feedback that farmers would be put off by the "other" category and potentially disengage (an interesting finding in itself, potentially indicating a deficit in anticipating relationally real inequality). As a compromise, we made the gender question open ended. While losing some of the performative impact this measure might have (e.g. participants learning/being reminded that there is more to gender identity than the binary), it kept the conversation going. The introduction of an "other" as a third category, while quite limited and potentially reaffirming a normative binary, would have been confronting and disruptive for these farmers, and while an open-ended question is ultimately more open in its potential to recognize a broader set of gender identities, it dodges that confrontation that makes social research potentially more disruptive. The next time we suggested asking more intentionally generative questions about valuing the knowledge of people from diverse backgrounds regardless of race, gender, class, etcetera, our research partners were more open and supportive of its use. This is an example, of the role of the researcher in also working to build trust across time while performing toward fairer assembling.

Returning to the issue of labour practice: once learning that labour was a hotspot, we began focusing our research on potential causes and implications of these practices from the perspective of social sustainability. For example, we became interested in how market pressures, unconscious discrimination, neocolonial narratives, and/or neoliberalism might explain current labour shortcomings. In preparation for fieldwork, we drafted two tables that dealt with these potential issues of labour and social sustainability to receive feedback from interviewees on (see Table 3 & 4). Part of the goal was to determine whether people viewed labour as an issue, who they viewed as responsible for exploitative practice, and what exploitive practices in the industry looked like. We learned that farmers do not view it as a significant problem and largely hold labour contractors as legally responsible for exploitative practice. While farmers may not have knowledge of labour violations on *their* orchards, there is evidence to suggest that it is occurring in the industry *somewhere*, and at a level that at least some industry participants recognize as problematic.

According to one key informant who was well embedded in labour management, there are employers who have exercised labour practices within the industry which would be

considered unjust and unacceptable. These practices include incorrect pay, inadequate living conditions, and lack of formal contracts. When it was recognized, justifications by farmers for existing exploitation were sometimes aimed at particular cultural groups (e.g. they have a different culture where this is normal, referring to Asian immigrants) and reflective of neocolonial narratives (e.g. we are helping those from poorer countries). Other times the onus for exploitation fell on contractors for generally being less honest and more profit-driven, without considering the role of farmers in this relationship. The industry was also sometimes implicated by being described as not taking action on the issue, although industry and government processes are in place to address the issue. By using example measures of development and performative social sustainability, either guiding our mindset or asking for feedback from producers, we were able to learn about such values and practices and plan for future research performance. We were also able to introduce development and performative concerns, particularly those that emphasized relational and institutional concerns (see Tables 3 & 4).

The degree to which problematic labour practices are present in the industry is still an empirical question. In an effort to manage this, the new practice adopted by the industry includes a checkbox assurance scheme that contractors or farmers fill out about labour practices, in addition to an official seasonal employer process and new contractor registration intended to manage the issues. Yet, our time studying the performative qualities of labour reporting suggests that such schemes are often not detailed enough to show the gradients of employment practices in particular contexts, while also avoiding possible bias from contractors. In other words, there has been a focus on meeting (or failing to meet) a threshold of acceptability, but less focus on differentiating between practices that range from exceptionally good, to barely scraping by, to below acceptable levels. Further, there is a displacement of moral responsibility and immoral behavior onto contractors, and sometimes this immorality is placed on particular ethnic groups. To help anticipate such potential shortcomings – which challenge achieving development sustainability goals of fairness and equality – our research team has suggested and asked for feedback on a process that includes confidential reporting on the part of the labourers themselves. This included a number of questions related to individual experiences, relationships, and procedures that may be helping or hindering more equitable assembling outcomes. Initial feedback from industry and farmers has been mostly supportive. However, we are still learning about how contractors and labourers may respond to such questions. Due to the (dis)placement of the moral and legal responsibility set onto the contractors, key stakeholder feedback expressed that some would view these questions are further unfairly burdening them instead of farmers and post-harvest groups. Initial conversations also suggest that labourers may find it difficult to openly have conversations about the experiences indicators might bring up. The concerns of who would benefit from such surveys suggest a sensitivity to the issues of development social sustainability. However, this is met with less concern for underlying relationally real drivers of inequality and therefore may end up benefiting those currently in more advantageous socio-cultural positions. As a way to enact performative social sustainability, we are advocating for further qualitative fieldwork to build trust with the contractors and labourers in an effort to determine effective indicators and deployment strategies, with fairer and more equitable futures in mind.

Table 3: Performative Fair Labour Measures

To what extent do you agree with the following statements (1=strongly disagree; 5=strongly agree):						N/A
My pay is fair	1	2	3	4	5	
My housing is good	1	2	3	4	5	
I am safe at work	1	2	3	4	5	
I am learning new skills	1	2	3	4	5	
I know who my employee representative is	1	2	3	4	5	
Men and women are treated equally at work	1	2	3	4	5	
I have time to talk to my co-workers	1	2	3	4	5	
If I have a good idea about a better way to complete my work tasks, I can talk to my manager about it	1	2	3	4	5	
I have access to good food	1	2	3	4	5	
The employer helps families get the things they need (ex school for kids)	1	2	3	4	5	
I can get a promotion	1	2	3	4	5	
I received good training for my job	1	2	3	4	5	
My job is helping me achieve the things I want in my life	1	2	3	4	5	

Table 4: Performative Social Sustainability Measures

To what extent do you agree with the following statements (1=strongly disagree; 5=strongly agree):						N/A
The labourer's dispute resolution process is effective	1	2	3	4	5	
Workers are able to talk to each other about their interests and aspirations	1	2	3	4	5	
There are good systems in place to ensure the workers are treated fairly	1	2	3	4	5	
The opinions of people from diverse backgrounds, in terms of gender, ethnicity, age and nationality can be helpful for making decisions	1	2	3	4	5	
I socialise with people who are not fruit growers	1	2	3	4	5	
It is important to maintain good relationships with members of the broader community	1	2	3	4	5	
It is important to maintain good relationships with people who are different than me in term of gender, race, nationality, interests and aspirations	1	2	3	4	5	
Most people in my community are trustworthy	1	2	3	4	5	
Leadership in the industry is trustworthy	1	2	3	4	5	
I am able to adequately express my views on sustainability to the broader society	1	2	3	4	5	
I able to work with people who have different views of sustainability than my own	1	2	3	4	5	

7: Indications of Performing Toward Better Futures

As we have posited, viewing indicators as processual, and informed by a relationally real analytic toward inequality, encourages reflection about what sort of indicators help develop more diverse and equitable assemblages. Aspiring to cultivate potentials for sustained expressions of and relations across difference, we have argued that social sustainability efforts can escape the domesticating quality of many indicators and actually better encourage what needs to be changed and maintained, and how. We have shown some of the ways we have worked through this using the cases of a fruit industry and a number of cooperatives. While some of our interdisciplinary and community research partners often focus upon individual behavior change (e.g. decreased fertilizer use, member recruitment), or maintaining a

particular group (e.g. farmers), the ability to do either is determined by the procedural, distributive, and transformative practices present. Being attuned to relational and institutional patterns, we suggested that groups work to improve material and symbolic space to connect across difference. For instance, this could include having more inclusive governing bodies, leadership reflective of traditionally marginalized communities, and processes that allow for affective relations (e.g. emotional connections). These are indicators that helped with reflection and action on the parts of our cases and in ways that were moving toward more developmental social sustainability ends.

Using relational realism decreases the challenges of the pillar approach because it recognizes entities as relational and processual. The "social", as the de facto place for culture, becomes a more pragmatic indicator that anticipates the symbolic aspects of relations which shape, and are shaped by, the environment and the economy. Experiences of the environment and economy is varied in the fruit industry – worker exploitation is tied to impacts of environmental practices and the depiction of the economy in indicators such as GDP. However, we can shift such narratives in our partnership by asking sustainable for whom? And of what? While measures to determine the distribution of resources across socio-economic groups, for example, may raise concerns, we believe that keeping the conversation going, while performing toward the concerns of development social sustainability, is vital to sustainability transitions. Disciplinary and sectoral tensions in the pillar approach can be used to fuel work around proposing and defending what "social" life is and ought to be. After all, these other disciplines and sectors are relationally real in what they enact and this does not occur in a vacuum. If we simply gave up our work on measures after industry representatives rejected them, we would not have gotten to a place to examine the nature of exploitative labour practices and how these may be addressed.

Representation is a fundamental human experience. Our senses, language, values, and various forms of meaning are the ongoing enactment of a multitude of accounts that span space and time. As narrators of knowledge, academics play a vital role in symbolic representation. Our narratives come with the responsibility of our role in illuminating and obscuring worlds. The process of creating and reexamining categories of meaning is ever ongoing. By remaining critical and defeatist in our ability to perform toward better worlds, we miss an opportunity to potentially improve the lives of people near and far.

We have argued that to perform toward better social futures requires a degree of anticipation, aided by the acknowledgment of relationally real structures. The focus of this exercise has been to highlight a few assertions put to work with other researchers, sectors, and communities in an effort to disrupt more common indicators of social sustainability in food and agriculture assembling. In doing so, we are processually working to enact fairer and more just worlds.

Bibliography

Agyeman, J., R. D. Bullard, and B. Evans. 2003. *Just Sustainabilities: Development in an Unequal World*. Cambridge, MA: MIT Press.

Åhman, Henrik. 2013. "Social Sustainability – Society at the Intersection of Development and Maintenance." *Local Environment* 18(10):1153–66.

Bateson, G. 1972. “A Theory of Play and Fantasy.” *Steps to an Ecology of Mind* 177–93.
Bell, S., & Morse, S. (2012). *Sustainability indicators: measuring the immeasurable?*. Routledge.
Bourdieu, Pierre. 1987. “Social Space and Symbolic Power.” *Sociological Theory* 7(1):14–25.
Boyer, Robert, Nicole Peterson, Poonam Arora, and Kevin Caldwell. 2016. “Five Approaches to Social Sustainability and an Integrated Way Forward.” *Sustainability* 8(9):878.
Burawoy, Michael. 1998. “The Extended Case Method.” *Sociological theory* 16(1):4–33.
Busch, Lawrence 2016. Looking in the Wrong (La)place? The Promise and Perils of Becoming Big Data. *Science, Technology & Human Values*, p.0162243916677835.
Çalışkan, K. and M. Callon. 2010. “Economization, Part 2: A Research Programme for the Study of Markets.” *Economy and Society* 39(1):1–32.
Callon, M. 2006. *What Does It Mean to Say That Economics Is “Performative”?*
Campbell, Hugh, Anne Murcott and Angela MacKenzie 2011. Kosher in New York City, halal in Aquitaine: challenging the relationship between neoliberalism and food auditing, *Agriculture and human values*, 28(1): 67-79.
Carolan, Michael and James W. Hale. 2016. “‘Growing’ Communities with Urban Agriculture: Generating Value above and below Groud.” *Community Development* 47(4):530–45.
Carolan, Michael and Diana Stuart. 2016. “Get Real: Climate Change and All That ‘It’ Entails.” *Sociologia Ruralis* 56(1):74–95.
Cochoy, F., M. Giraudeau, and L. McFall. 2010. “Performativity, Economics and Politics: An Overview.” *Journal of Cultural Economy* 3(2):139–46.
Dauvergne, P., & Lister, J. (2012). Big brand sustainability: Governance prospects and environmental limits. *Global Environmental Change*, *22*(1), 36-45.
Foucault, Michel. 1980. *The Confession of the Flesh. In Power/Knowledge: Selected Interviews and Other Writings*, edited by C. Gordon, 194-228. New York: Pantheon Books.
Foucault, Michel. 1982. “The Subject and Power.” *Critical inquiry* 777–95.
Gibson-Graham, J. K. 2008. “Diverse Economies: Performative Practices for `other Worlds’.” *Progress in Human Geography* 32(5):613–32.
Gibson, Robert. 2006. “Beyond the Pillars: Sustainability Assessment as a Framework for Effective Integration of Social, Economic, and Ecological Considerations in Significant Decision-Making.” *Journal of Environmental Assessment Policy and Management* 8(3):259–80.
Grove, Kevin and Jonathan Pugh. 2015. “Assemblage Thinking and Participatory Development: Potentiality, Ethics, Biopolitics.” *Geography Compass* 9(1):1–13.
Hale, James and Michael Carolan. 2018a. “Cooperative or Uncooperative Co-Operatives?: Digging into the Process of Cooperation in Food and Agriculture Cooperatives.” *Journal of Agriculture, Food Systems, and Community Development* 8(1):1–20.
Hale, James and Michael Carolan. 2018b. “Framing Cooperative Development: The Bridging Role of Cultural and Symbolic Value between Human and Material Resources.” *Community Development* 49(4):360-379.
Hatanaka, Maki, Carmen Bain, and Lawrence Busch, L., 2005. Third-party certification in the global agri-food system. *Food policy*, 30(3), pp.354-369.
Hatanaka, M., Konefal, J. & Constance, D.H. Agric Hum Values (2012) 29: 65. https://doi.org/10.1007/s10460-011-9329-7

Hicks, C. C. et al. 2016. “Engage Key Social Concepts for Sustainability.” *Science* 352(6281):38–40.

Higgins V., Larner W. (2010) From Standardization to Standardizing Work. In: Higgins V., Larner W. (eds) Calculating the Social. Palgrave Macmillan, London

Jelinski, D. E. (2005). There is no mother nature—there is no balance of nature: culture, ecology and conservation. Human Ecology, 33(2), 271-288.

Law, John and John Urry. 2004. “Enacting the Social.” *Economy and Society* 33(3):390–410.

Muller, Martin and Carolin Schurr. 2016. “Assemblage Thinking and Actor-Network Theory: Conjunctions, Disjunctions, Cross-Fertilisations.” *Transactions of the Institute of British Geographers* 41(3):217–29.

Robertson, M. 2012. “Measurement and Alienation: Making a World of Ecosystem Services.” *Transactions of the Institute of British Geographers* 37(3):386–401.

Rosin, Christopher, Hugh Campbell, and John Reid. 2017. “Metrology and Sustainability: Using Sustainability Audits in New Zealand to Elaborate the Complex Politics of Measuring.” *Journal of Rural Studies* 52:90–99.

Rothschild, Joyce. 2016. “The Logic of A Co-Operative Economy and Democracy 2.0: Recovering the Possibilities for Autonomy, Creativity, Solidarity, and Common Purpose.” *The Sociological Quarterly* 57(1):7–35.

Stanley, T. R. 1995. “Ecosystem Management and the Arrogance of Humanism.” *Conservation Biology* 9(2):255–62.

Turnhout, Esther. 2009. “The Effectiveness of Boundary Objects: The Case of Ecological Indicators.” *Science and Public Policy* 36(5):403–12.

Turnhout, Esther. 2018. “The Politics of Environmental Knowledge.” *Conservation and Society* 16(3):363–71.

Turnhout, Esther, Katja Neves, and Elisa De Lijster. 2014. “‘Measurementality’ in Biodiversity Governance: Knowledge, Transparency, and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (Ipbes).” *Environment and Planning A* 46(3):581–97.

Vallance, Suzanne, Harvey C. Perkins, and Jennifer E. Dixon. 2011. “What Is Social Sustainability? A Clarification of Concepts.” *Geoforum* 42(3):342–48.

Wright, Sarah. 2015. “More-than-Human, Emergent Belongings: A Weak Theory Approach.” *Progress in Human Geography* 39(4):391–411.

Wanner, T. (2015). The new ‘passive revolution’of the green economy and growth discourse: Maintaining the ‘sustainable development’of neoliberal capitalism. *New Political Economy*, *20*(1), 21-41.

View publication stats