Geoscience and sustainability

In between keywords and buzzwords

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Geoscience and Sustainability – In between Keywords and Buzzwords

Abstract

This paper explores how scientists entangle themselves in between keywords and buzzwords when they make use of concepts like sustainability. It sketches out theoretical distinctions between keywords and buzzwords. Then it turns to the concept of nature discussing the paradox that nature embraces the same fuzzy, slippery and contingent character as does sustainability, yet the former has a deep ontological status, the latter does not. The paper explores a related paradox: natural sciences claim we live in the Anthropocene, in which humans have transformed geochemical cycles, e.g. of methane and carbon dioxide as much as they changed between glacial and interglacial periods. Yet, science favors (external) nature as a keyword, sustainability as a buzzword. This should cause deep reflections on how scientists make use of the power of reference in between keywords and buzzwords – as well as critical reflection on the institutionalization of such concepts.

Introduction

In 2004 Naomi Oreskes claimed that scientific consensus on climate change exists to the extent that 97 % of research articles in high-impact factor journals, like Science and Nature, confirm the thesis that climate change is fundamentally anthropogenic (Oreskes 2004). The planetary crisis, on which scientists seem to form a common consensus platform does not imply a new era of 'consensus science'. Rather it imposes challenges to 'classical' socio-natural epistemologies. Consensus situates anthropogenic climate change as a 'scientific fact', this have the conjoint capacity to assemble scientists, non-human and human natures in ways that affect one another.

While the inculcation of sustainability and academic governmentalities individualize and institutionalize the use of keywords and buzzwords, the paper raises concern over the political ecologies of reference making and the "commodification of nature" (Loftus 2015)

from within academia. As for the academic work in general and for concepts like sustainability, nature, circular economy, resilience or the Anthropocene in particular, they display a number of tactics in the search for grands, academic reputation and publication records (Grindsted 2015). Yet, different notions of sustainability both mobilize neo-liberal interests and accelerate thinking of universities as marketable entities. At the same time sustainability is a source for critical intervention (Maxey 2009).

Distinguishing keywords from buzzwords

According to Castree (2014) three characteristics distinguish keywords from buzzwords. First keywords do not come and go, tend to be stable and are more or less unaffected by economic, cultural or ideological changes. Keywords tend to be unaffected by political pressure or changes in funding mechanisms. Although academics lean towards key concepts and the power they inhere, they do not in general signify 'state of the art'. Keywords are immune to quick fixes as the power of referencing, funding mechanisms or 'politico-ecological winds'. If one considers the use of sustainability in geography, it becomes apparent that the concept does not meet the first criteria. Nevertheless, the concept has been preached for forty years and seems to be one, that will not go away neither in academia nor in civic society.

Secondly keywords are used widespread and frequently in all sorts of contexts. Keywords are familiar within or even beyond a given academic episteme. Sustainability is a great example of a fuzzy concept used in all sorts of contexts in academia and beyond. It is heavily used in the rhetoric of political discourse and hard to avoid as a human geographer. It is precisely the widespread use and the 'use' of its diffuse character that provides the concept with its capacity to 'go around the back' to legitimize a given agenda (Harvey 1996). In academia sustainability seems to make space for external activism, while it gains little space for internal activism due to its low status (buzzword), e.g. in geography (Grindsted 2015).

The third characteristic concerns their 'social force' (Castree 2014), which is the degree to which the receiver accompanies the meaning and argument using such concepts. In academia, the 'social force' of sustainability does not make it a keyword. Hearing sustainability, a 'real academic' will immediately 'wrinkle his/her nose' and associate criticism attached to it. By contrast, keywords possess the ability to sort our mode of thinking, give direction and draw upon the distinctive power that lies in giving reference to something or somebody of general acceptance.

Whereas keywords are used unimpededly, sustainability is scrutinized because of its lack of definition, its capacity to legitimize 'nearly everything'. This gives rise to a paradox. It may be equally difficult to clarify the word of nature. Raymond Williams notes how nature "may be one of the most complex word in our language since the idea of it contains, though often unnoticed, an extraordinary amount of human history…(…) both complicated and changing as other ideas change" (Williams here quoted in Harvey 1996, p. 26). Williams examines how nature, this complex, fuzzy, slippery concept, holds power that is normalized by ways in which it governs and directs our thinking. At this point I claim nature is a keyword, sustainability a buzzword and yet both are extraordinarily fuzzy, slippery and contingent. Keywords produce imaginative geographies that lead the audience into a desired direction. The imaginary geographies comprehend and encompass huge amounts of tacit power, with

quite different political ecologies as a result. Disciplines and departments carrying sustainability in their name have only recently begun. Whereas the former finds nature to be external, the latter recognizes that 'nature cannot pre-exist its construction' as Haraway puts it.

The fact that humans cannot escape their socio-natural embeddedness made 'nature' a keyword to Williams - one that performs political action and analysis (Harvey 1996). Conceptions, abstractions and the ways in which academics refer to the (socio) natural write new environmental geographies. The three characteristics do not only distinguish key concepts from buzzwords, they are also defined out of time-space configurations; the time scales given, the spatial organization and through their historical and contextual differentiation. Moreover, they co-produce mental geographies with specific connotations to the socio-natural.

Practicing discourses and discourses of practice

Originally coined by Foucault the term governmentality refers to the self-government, whereby individuals undertake work in the interest of the principal. Governmentality describes how subjects are involved in projects of their own, while their freedom is dictated by others. Academic governmentalities refer to the process of self-governance within academia, seeking to capture the ways in which university governance and knowledge management affect how one navigates in that work. Thus, academic governmentality holds a critical attitude towards the freedom to conduct research by addressing a number of implicit structural layers of power, with reference to symbols, codes of conduct, tacit norms, and tactics (Berg in Castree 2006). Power of reference connotes how academics make reference, both as a process of self-governance within academia and in a broad sense how academics make reference (to references) when representing cultures of nature(s). Shaping the social valuation of excellence work, describes how these processes come to justify theories, methods, assumptions, themes or concepts, while they at the same time make reference to nature. Thus, the power of reference is an academic form of governmentality that shapes social practices and the habitual power in representing a given scientific problem, paradoxes or phenomena in a certain way that simultaneously produce layers of hidden (tacit and tactic) knowledge yet authoritative truth.

Academics do tremendous work on deconstruction and reconstruction, produce genealogies, develop new concepts, theories and ideas that wonderfully spiral into manifestations and strategies embracing huge amounts of tacit knowledge. In our individual work, we take a theoretical framework, and blend them into a number of related theories. In so doing we spend great effort in framing our work as new (Harvey 2005). For young researchers, it is a well-known strategy to kick-start their career attacking well-known researchers hoping for response to the critiques given (Sheppard in Castree et al., 2006). Again, with an underlying caution to promote one's own stand. In finding one's place to undertake research for better, more accurate and valid scientific knowledge, one needs to find a space to shape a career platform, hence enter into the fight over symbolic and reputational capital.

In this fight, one can hardly ignore policy agendas and university governance under

which universities are managed, to secure external funding and the highest possible publish record, the neoliberal management schemes under which scientists' work (Editorial Collective 2007). In finding and shaping place in academia, spaces of work have huge effects to governmentalities of that work. This applies in geography and beyond. However, practicing power of references is both shaping and is shaped by the scientific climate with effects on the sustainability of the work environment itself, as well as the governmental forms under which socio-natural concepts like sustainability develop, is orchestrated and theorized (Mansfield 2009). Academic governmental(ities), then, are filled with presumptions and statements concaving huge amounts of tacit knowledge, which is why the power of references becomes a problem particularly when refereeing to fuzzy concepts like nature or sustainability, assembling the socio-natural. The following explores five dimensions of the power of reference.

Power of Reference

1) The practice of quoting is essential. In selecting any theory academic work has developed on the basis of outstanding literature that includes an immense body of related theories that, in turn, has been developed from previous work. While producing a hidden critique, it is all framed within layers of tacit knowledge, though never explicated, of course. The powerful layers of silence, however, continue. In choosing superb work by Michel Foucault, Michel Callon, Bruno Latour or Phillipe Descolar (geographies of choosing French, opposed to Anglo-Saxon cultures of theory), there are also huge amounts of organized power involved. Likewise, sustainability or the Anthropocene is highly Eurocentric (Chakrabarty 2009). 'Power of references' certainly has a geographical dimension (Paasi 2005).

Choosing famous theorists has also the tendency to produce authoritative arguments. Leading figures represent authoritative 'truths' within research communities that serve the body of shared cultural references. What icons say have impact on dialogues within that episteme. Icons have an impact on regulative practices of how we conceive the world (Castree 2014). Harvey and Castree are such icons, even academic brands with canonical effects (Thrift 2006), with a market for them that in turn performs that market. Whether it is suitable that a scientific community incorporates a language of sustainability or not, epistemic work produces asymmetric power relations with effects on the condition of sustainability (equity) as well as on inclusion and exclusion of features, themes or approaches (Castree 2014).

2) 'Power of reference' is organized within and between disciplines. Massey (1999) wonderfully depicts the 'envy of physics' whereby 'soft sciences' make reference to 'harder sciences' to bolster one's argument. It may be cultural geographers who appeal to urban geographers, who in turn may plea to physical geographers. This habit appeals to an implicit imagination that affects the hierarchy of disciplines.

This higher authority converts into suspect reference strategies. The irony to Massey (1999) is that physics have moved on which has deep implications to the interdisciplinary dimension of sustainability and climate changes, and how these problems are organized under a given episteme. By way of illustration climate change modelling is dominated by 'hard sciences' and economics, reducing human behavior to a matter of instrumental rationality (Grindsted, 2014).

3) Academics give phenomena, ontological and epistemological status. It is interesting how something is given status as a problem, how we give it relevance, how we give explanation to it. Questioning the existing order of representations therefore is a question of when a phenomenon is given agency or explanatory power in relation to the problem at hand (Castree 2001). This has deep implications to how we theorize on sustainability; organize its complexity, its holistic and particular dimensions (Mansfield 2009).

4) How does one make reference to a particular theme or a specific concept, i.e., Anthropocene, resilience or environmental (in)justice. Concepts merge, overlap and blur into one another, and are organized as power configurations producing political ecologies. Concepts like nature or sustainability have been promulgated in many ways that produce theoretical anomalies. Climate skepticism is a wonderful example. While 3 per cent of the climate science community may be right that climate change is not anthropogenic (Oreskes 2004), the position holds great capacity to receive attraction in academia, media or beyond. Further, the concept serves as a center for epistemic communities. Whether one finds evidence for anthropogenic climate change or not, the reference serves as a point of identification. Most intriguing, while one sometimes replaces concepts that refer to the socio-natural with others affecting how we make reference to nature, the neo-liberalization of universities commodifies nature into science itself.

5) The economy of power of reference holds immense political ecologies in between keywords and buzzwords. The bibliometric research indicator is one example. Any research application is subject to BFI and represent carefully selected words (Berg in Castree et al., 2006). Academic writings carefully refer to keywords mixed with concepts considered to have the desired impact. Cultures of quoting, transform arguments, findings, and positions into calculative 'impacts', e.g. journal ranking. The better rank, the better chance for profiting from the economy of quotation/reference. The neo-liberalization of quoting affects academic life, not least the intensification of economic thinking, subject positions and academic govermentalities, through which sustainability, climate change and the Anthropocene are understood (Sheppard in Castree et al., 2006).

Socio-natural change in between keywords and buzzwords

I initially portrayed nature a keyword, sustainability a buzzword. Further, the paradox that the concept of nature holds the same fuzzy, slippery and contingent character as sustainability was described. Yet the former has a deep ontological status, the latter not. A related paradox follows. The natural sciences have verified results over the past century or so to suggest that humans cause global environmental change, having transformed the geochemical cycles, e.g. of methane and carbon dioxide, as much as they changed between glacial and interglacial periods. Yet, many scientist's separate nature as something external.

Although "anthropogenic climate change" is established as a scientific fact that has the conjoint capacity to assemble science, humanities and non-human natures in ways that affect one another, nature is largely separated out of society in many "natural science departments". Malm and Hornborg (2014) argue that anthropogenic climate change involves a more serious examination of "humanity" as a driving force. Insofar as global warming is caused by humans,

this is a process of socializing nature (Castree 2001). Yet, science favors (external) nature as a keyword, sustainability and the Anthropocene as a buzzword. The recognition that global environmental change is socially produced is precisely the core of the paradox, since (natural) science upholds the idea of an external and objective nature (Demeritt 2002).

The two paradoxes suggest that the first characteristic of keywords does no longer apply to 'external' nature. Rather, nature is dynamic and changes as human cultures develop. While the second and third characteristic concern the context and the social force of keywords, sustainability, and relational dynamic socio-natural concepts, the culture of reference making displays sustainability as a buzzword, and it may likewise be displayed as a keyword if ontologically developed. This process of socializing nature produces a number of scientific tensions and interests to reference making, internally within the scientific process of conducting knowledge and externally as to societal responses to that knowledge.

As sustainability is fiercely contested, the power of reference is predominantly important. While many relational concepts, like sustainability or the Anthropocene, are exceptionally vague, relational approaches offer a way to go beyond buzzwords and keywords challenging dominant assumptions, conventions and representational modes that accept the 'reality of construction'. As far as the art of reference making and the "envy of physics" prevail into quoting cultures, they hold power structures "referring to harder sciences" that call for relational approaches. Relational concepts offer a perspective that challenge and criticize everything there is, including itself (Castree 2001).

Much theory building in the social and natural sciences seems little established with respect to its material dimension of reference making, e.g. how the academic division of labor is organized into separate disciplines in the (natural versus social) sciences. Relational approaches transcend a one-dimensional perspective in thinking about the material side of social practices that sometimes seem underdeveloped in sustainability discourses. Consequently, one has to look at relations between social practices and habits of thoughts, in ways that fundamentally reject ontological dualism that separates nature from society (Harvey 1996). The matter matters. More appropriate methodological approaches not only in the interface between social and natural sciences, but also in ways that templates the duality between the material form and the social processes of valuation, are needed (Harvey 1996).

Such reflections are fundamental as different concepts (sustainability, Anthropocene, resilience) reside in different socio-material ontologies. It follows that different socio-material ontologies produce radically different socio-environmental geographies. Sustainability approaches cannot be reduced to only a matter of fact, but also a matter of concern over representing the human-environmental interface. From this perspective, relational approaches are based upon an intra- and extra-discursive reality, implying that elements independent of human perception are sometimes formed through human practices. The reverse is also true, that elements dependent on human perception have sometimes (no) influence on material processes (Demeritt 2002). Taking the power of reference into consideration, whatever socio-natural concept it manifests, is also a journey into how different philosophies of science produce different geographies that influence our thinking on those interactions.

As climate/sustainability science produces knowledge, from which socio-ecological decisions mutually change forms of appearance and forms of realization it becomes of

evermore importance to understand how the power of reference produce political ecologies. Sustainability is often considered a low status subject. This needs to be challenged. Nature has moved on.

Conclusion

This paper entangled nature and sustainability between buzzwords and keywords. It demonstrated how both sustainability and nature hold a complex and slippery character. This introduced the first paradox. Sustainability features as a buzzword, nature a keyword. A second paradox follows. While sustainability feature as a low status subject, scientific results claim that humans is the driving force in global environmental change, nature, however, remains separated from society.

The power of references developed five dimensions in exploring cultures of referring to nature conveying its relevance for science in general and for sustainability in particular. We need to develop socio-environmental concepts that critically look beyond the power of reference.

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