A Radical Journal of Geography
ANTIPODE

The Dark Side of Transformation: Latent Risks in Contemporary Sustainability Discourse

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Antipode Vol. 50 No. 5 2018 ISSN 0066-4812, pp. 1206–1223 doi: 10.1111/anti.12405

Abstract: The notion of transformation is gaining traction in contemporary sustainability debates. New ways of theorising and supporting transformations are emerging and, so the argument goes, opening exciting spaces to (re)imagine and (re)structure radically different futures. Yet, questions remain about how the term is being translated from an academic concept into an assemblage of normative policies and practices, and how this process might shape social, political, and environmental change. Motivated by these questions, we identify five latent risks associated with discourse that frames transformation as apolitical and/or inevitable. We refer to these risks as the dark side of transformation. While we cannot predict the future of radical transformations towards sustainability, we suggest that scientists, policymakers, and practitioners need to consider such change in more inherently plural and political ways.

Keywords: transformation, transformations to sustainability, sustainable development goals (SDGs), power, politics, discourse

Introduction

> We are determined to take the bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path. (United Nations 2015)

Transformation has become the new buzzword in contemporary sustainability debates. Narratives of unprecedented human impacts on the Earth's systems, and mounting evidence that incremental adaptation will no longer suffice, underpin calls for radical transformations, which policymakers have endorsed at the highest level. In 2015, the United Nations launched the sustainable development goals (SDGs) under the auspices of "transforming our world". The 2030 Agenda for Sustainable Development calls for transformative goals, targets, and visions, and suggests that achieving these ambitious aims will require "structural transformation" (UN 2015:11). In 2014, transformation appeared as its own chapter in the Intergovernmental Panel on Climate Change's fifth assessment report for the first time (Clarke et al. 2014). The chapter concludes that stabilising greenhouse gas emissions will require "large-scale transformations" (Clarke et al. 2014:418). Clearly, the idea of transformation is gaining traction in global environmental change policy debates.

In contrast to resilience (defined as persistence) or adaptation (defined as incremental change), transformation is often described as significant reordering, one that challenges existing structures to produce something fundamentally novel (Brown 2015; O'Brien 2012; Pelling 2010). The notion of transformation contributes to an emerging body of research and practice built on doing things fundamentally differently, fostering systemic reform, and creating genuinely alternative futures (Kates et al. 2012; O'Brien 2013; Westley et al. 2013). The momentum building around the possibility for paradigm shifts at multiple levels and in the way these shifts are imagined, studied, and supported opens an exciting space for social scientists, and human geographers in particular, to contribute towards more sustainable and equitable trajectories (Castree 2015; Hulme 2015; Inderberg et al. 2014).

Yet while deliberate transformation may be necessary in many contemporary contexts, essential elements of the nascent field remain underexplored and warrant critical attention (Brown et al. 2013). As Karen O'Brien recently observed, "the lack of a critical, integrated body of research on transformation is both surprising and disconcerting" (2012:668). Unlike adaptation or resilience, the notion of transformation does not yet rest on a well developed theory, nor is it associated with a widely accepted set of practices or strategies (Shove 2010). As scientists, policymakers, and practitioners mainstream the idea across sustainable development agendas, ambiguities in the framing, justification, and practice of transformative change may create tensions and implementation challenges. Common across most emerging transformations discourse is the normative premise that fundamental change (i.e. via technological innovations, institutional reforms, behavioural shifts, etc.) is essential to support desirable futures. Critical questions remain, however, as to what constitutes transformative change, how the concept will mutate as it is translated from an academic concept into sets of normative actions, and how this process might influence social, political, and environmental change.

We engage these questions here through a critical review and synthesis of the literature. We begin by exploring how scientific and policy discourse frame the notion of transformation and the rhetoric that is being used to justify transformative change, and describe the uptake of the term into contemporary sustainability circles. Next, we propose that the translation of transformation from an academic concept into sustainable development prescriptions may be associated with five latent risks, which many scientists and policymakers rarely acknowledge. We use the idea of risks so as not to critique the discourse entirely but rather to propose potential problems that could undermine the transformation project and expose vulnerable parties to harm if not properly addressed. We refer to these latent risks as the *dark side* of transformation. Finally, we explore two potential future research directions that offer opportunities to allay some of the risks associated with the dark side of transformation. Ultimately, we aim to add a critical voice to the emerging debates that construct transformation as universally desired and desirable during this historic juncture for sustainability science.

The Transformative Turn in Sustainability Science

> Transformation breathes! It has entered the life cycle of dangerous words. (Pelling 2014:1)

We base this paper on the premise that the language used in internationally agreed goals and policies is significant—it sets the discursive context for international sustainable development agendas and it shapes sustainability research, policy, funding, and interventions. The semantic shift towards transformation will shape pathways towards common futures through identifying what is desirable and by defining the kinds of knowledge that informs and supports change (Keenan et al. 2012). Therefore, before describing five potential risks associated with the mainstreaming of transformation, we must first explore how scientists, policymakers, and practitioners are framing the term.

Sustainability scientists broadly understand transformation as fundamental restructuring not only in specific sector-based systems such as energy, food, and urban systems, but also in social, economic, and political systems (Blythe et al. 2017a; Eriksen et al. 2015; Moore et al. 2014; Pelling 2010). Common across most framings is the premise that in order to address the root causes of inequality and environmental degradation, significant systemic changes that challenge existing structures are required. Haberl et al. (2011), for example, describe the scale of contemporary transformation to sustainability as comparable to the transition from hunter-gather to agrarian societies and from agrarian to industrial societies. Importantly, transformation as a concept "describes the depth of change, but not its origin, breadth or trajectory" (Pelling et al. 2015:115). While the literature remains characterised by a wide variety of interpretations, four general framings of transformations to sustainability have emerged and been recognised (Feola 2015; Patterson et al. 2016):

(1) *Transitions approaches*: with roots in social-technological studies, complex systems thinking, and institutional economics, transition approaches largely characterise transformation as multi-scalar, socio-technological transitions towards low-carbon futures (e.g. engineering innovations) (Geels and Schot 2007; Geels et al. 2017; Loorbach 2010).

(2) *Social-ecological transformations*: scholars at the Stockholm Resilience Centre and their colleagues pioneered much of the early theoretical thinking on transformation within the field of resilience (Olsson et al. 2014; Westley et al. 2013). From a social-ecological perspective, social-ecological transformation results in novel, emergent system properties, changes in critical systems feedbacks (Chapin et al. 2009), and a re-ordering of social-ecological relationships (Olsson et al. 2017). It is recognised that any transformation will also involve unanticipated consequences that may make some conditions worse than before (Moore et al. 2014; Olsson et al. 2014).

(3) *Sustainability pathways*: emerging from the intersection between critical development studies (Leach et al. 2012; Scoones et al. 2015) and resilience thinking on planetary boundaries (Rockström et al. 2009), the sustainable pathways approach emphasises the need for balance between human development objectives, justice, and ecological sustainability, with a particular focus on the power and politics of institutional change (Leach et al. 2012).

(4) *Transformative adaptation*: developing from human geography and political ecology perspectives on vulnerability to climate change (Ribot 2011), transformative adaptation approaches shift the analytical focus of transformation research from accommodating change (e.g. adaptation to climate change) to contesting the underlying social, political, and economic structures that produce marginalisation and inequality (Eriksen et al. 2015; O'Brien 2012; Pelling et al. 2015).

The notion of transformation is gaining traction within the academy. In 2018, the high-impact Nature Research Group launched a new journal called *Nature Sustainability*. One of the six priority questions listed under the new journal's Aims and Scope asks: "What kinds of behavioural and institutional barrier inhibit the *transformations* needed to achieve more sustainable lifestyles, economies and societies more broadly?"[1] *Ecology and Society*, described as a journal of integrative science for resilience and sustainability, currently has three ongoing Special Features dedicated to transformation.[2] Academic books, focused entirely on understanding and supporting transformations, are being published (Armitage et al. 2017; Westley et al. 2017). And the International Social Science Council (ISSC) recently launched a global programme called "transformations to sustainability".[3]

The term transformation is increasingly appearing in prominent sustainability policies and platforms. In addition to the UN's SDGs and the IPCC's most recent assessment report, transformations forms one of the three pillars of the global platform Future Earth (ICSU 2013). In 2018, Future Earth is hosting a conference in South Africa called "Seedbeds of Transformation" which aims to bring together representatives from government, industry, research and non-governmental organisations to examine the role of transformation in achieving the SDGs in Africa.[4]

Finally, the notion of transformation increasingly informs a set of applied practices that seek to safeguard natural systems and enhance societal wellbeing for future generations. For example, the United Nations' New Urban Agenda aims to foster transformation through the adopting of lower carbon technologies, among other strategies (UN 2017). The German Advisory Council on Global Change policy document, entitled *World in Transition—A Social Contract for Sustainability*, prescribes ten actions to facilitate the transformation towards sustainability, such as the development of a common European energy policy and carbon pricing (WBGU 2011). Antigua and Barbuda recently established a Ministry of Social Transformation and Human Resources.[5] Grassroots and community-scale initiatives aimed at fostering transformative change are proliferating. For example, the Transition Network, a global social movement now established in more than 200 communities, promotes the transformation of local communities through actions such as decentralised food, water, and energy systems.[6]

Thus, while sustainability scientists apply transformation as an academic concept to *describe* social-ecological interactions, policymakers increasingly use it as a tool to *prescribe* real world actions and to make claims about the actions and policies they will implement. This shift, from theory to practice, is producing ambiguities and tensions with significant implications for social, political, and ecological change. We acknowledge that a diversity of interpretations increases the potential for innovation and creativity (Braun 2015). Yet, the flexibility of the term also renders the idea open to misinterpretation and manipulation and means that policymakers can invoke the idea to justify all sorts of interventions (Star 2010).

In the past, critical scholars have developed similarly radical concepts as counters to dominant narratives, and these have often lost their revolutionary character as policymakers and practitioners have translated them into mainstream policy and practice. For example, international development programs have picked up the sustainable livelihood approach, simplifying the concept in application and resulting in the loss of some of the core elements of the original term (Scoones 2009). Scoones (2009) argues that policymakers and practitioners eschewed nuances of power, politics and social differentiation, in favour of checklists, which are easier to operationalise. In a similar vein, the notion of adaptation to climate change has been used to rebrand dominant development policy while essentially acting to maintain existing structures of power (Brown 2011; Eriksen et al. 2015; Yates 2012).

Five Latent Risks

The notion of transformation is becoming an essential component of contemporary sustainability discourse and, therefore, warrants critical reflection. In this section, we draw on our expertise as social scientists working within sustainability science to conduct a critical analysis of the literature. We interrogate how discourse that constructs transformation as apolitical or inevitable may generate significant risks. Our analysis is not focused on transformation as an academic concept. Rather, we examine the discourse which is emerging as part of what is being referred to as the "transformative turn" in sustainability science (Dentoni et al. 2017). In particular, we explore the way in which diverse social actors present and articulate sustainability transformations. Through this process, we identify five latent risks associated with the shift from descriptive to prescriptive engagements with the concept of transformations to sustainability. These risks are fluid, interactive, and not meant to be comprehensive or exclusive. We intend them to stimulate debate over the potential implications of the proliferation of transformation discourse.

Risk 1: Transformation Discourse Risks Shifting the Burden of Response onto Vulnerable Parties

In the context of global environmental change narratives, citizens are increasingly encouraged to become more self-aware, proactive and prepared—with an associated decrease in dependence on and expectations of the state (Joseph 2013; O'Brien 2015). In a widely cited article on transformations towards sustainability, Kates et al. (2012:7160) propose that "[i]f serious disruptions are to be avoided, vulnerable parties should consider anticipatory transformations". Rather than seeking to understand how public and private sectors might mitigate or re-distribute environmental risks, this framing calls on communities to build their own resilience to a range of risks. For example, the United Kingdom's Foresight project appeals to individuals to relocate in response to environmental change: "migration can represent a "transformational" adaptation to environmental change, and in many cases will be an extremely effective way to build long-term resilience" (Foresight 2011:7).

Yet, a growing group of critical scholars raise concerns about shifting the responsibility for safeguarding future security from states to citizens (Duffield 2012; Evans and Reid 2013; Ribot 2011). For Barnett and O'Neill (2012), the promotion of migration as a (positive) transformative strategy, rather than as a (negative) impact of climate change, is a worrying instance of macro-neoliberal politics. Transformation discourse rooted in this type of thinking risks shifting the burden of response from the systemic drivers of global change (i.e. the state, capitalist production systems, transnational corporations, etc.) towards individuals or communities as the most appropriate drivers of transformational change (Ayers and Huq 2013; Dodman and Mitlin 2013; O'Brien 2015). These types of assertions have significant implications for who we collectively perceive as appropriate actors to enable transformation, and which interventions we prioritise (Fabinyi et al. 2014). As Cameron et al. (2015) and others have argued, this choice is not neutral.

Rather, by shifting the burden of response to global environmental change from those who have caused it to those who are most effected, transformation discourse may serve to disempower and further marginalise vulnerable groups.

Risk 2: Transformation Discourse May Be Used to Justify Business-As-Usual

The recent proliferation of research and the uptake of the term transformation generate a growing ambiguity in the analytical specificity of the term. In particular, there seems to be ongoing conceptual confusion about the differences between adaptation, transformation, and business-as-usual (Fook 2017). For instance, the International Social Sciences Council (ISSC) is widely recognised for being influential in shaping the field of human dimensions of global change research, given the support they have provided for social science scholars through programs such as their Transformations to Sustainability program.[7] But, a critical reading of the ways in which the Council is funding research and development activities indicates the term may serve as a "catch all" that does little to help clarify whether any and every type of change can now be categorised as transformation. This holds true for numerous development organisations, philanthropic actors, and government initiatives (for further review, see Olsson et al. 2017).

The consequences of this ambiguity go beyond semantic debates. The tendency to use transformation as a loose description or as interchangeable with adaptation both (1) directs effort towards building the resilience of the *existing* system rather than transforming it, which is in direct opposition to the intention of engaging in transformation research and practice; and (2) as a consequence, provides yet another means to justify business-as-usual approaches. A dramatic example played out in South Africa as Jacob Zuma built the political programmes, within his final years as president, around the concept of "radical economic transformation". Bhorat et al. (2017) argue that the discourse around economic transformation was used as cover for political collusion and corruption that challenged both democracy and development in the country. They conclude that "[a]t the epicentre of the political project mounted by Zuma is a rhetorical commitment to radical economic transformation" while in reality the term "is being used as an ideological smokescreen to mask the rent-seeking practices of the Zuma-centred power elite" (Bhorat et al. 2017:2–3). Rather than creating a genuinely new economic paradigm which supports legitimacy, the discourse of transformation was used to further entrench power and resource flows in purposefully deceptive ways.

As a second example, "the green economy" is often articulated as an intended outcome of institutional transformation *and* as a set of instructions for socially transformative economic practices and relations in the global environmental governance arena (Corson et al. 2013, 2015; Corson and MacDonald 2012; MacDonald 2013). This wider uptake of green market language (i.e. ecosystem services, green growth, green bonds) speaks to shifting ideologies, alignments, and governance preferences within organisations that take part in multilateral environmental negotiation and project funding/implementation. Its strongest critics thus see "the green economy" as both reflective and constitutive of processes whereby "institutions of environmental governance [are transformed into] vehicles that can be used in the interest of capital accumulation" (MacDonald 2013:47). Corson and MacDonald (2012) also highlight that international organisations and multilateral actors can be complicit in "green grabbing" or "ocean grabbing" in well-meaning attempts to align elite priorities with funding streams (Bennett et al. 2015; Silver et al. 2015). A critical risk therefore rests in the fact that the green or blue economy—as an objective, as a set of instructions, and as a rationalising discourse—can manifest local political and institutional conditions supportive of land, ocean, and resources grabs premised on environmental improvement (Fairhead et al. 2012). For example, the African Union now connects the blue/ocean economy with *continental transformation*:

> Africa's Blue/ocean economy, which is three times the size of its landmass, shall be a major contributor to continental transformation and growth, through knowledge on marine and aquatic biotechnology, the growth of an Africa-wide shipping industry, the development of sea, river and lake transport and fishing; and exploitation and beneficiation of deep sea mineral and other resources. (African Union Commission 2015:3)

Oceans are therefore now receiving significant attention as spaces of new economic possibility (Bennett et al. 2015; Campbell et al. 2013), and to "unlock" this potential, calls for ocean conservation and development programs funded through strategic public–private finance come from numerous corners (Silver et al. 2015). In the months after Rio+20, twin reports from the United Nations Development Program argued that an influx of $5 billion over the next 10–20 years could "be sufficient to catalyze several hundred billion dollars of public and private investment" and "foster transformation of ocean markets towards sustainability" (UNDP 2012:3). Yet, for the World Forum of Fisher Peoples, the investment in protection of mangrove forests through "blue carbon" initiatives is a "false solution" that undermines their rights and livelihoods (WFFP 2015). As these examples demonstrate, the language around transformation can create what Foucault (1980) refers to as regimes of truth. In other words, policymakers can distort the language of transformation to define acceptable formulation of problems and solutions to those problems that serve to reproduce existing structures of power and domination and justify business as usual.

Risk 3: Transformation Discourse Pays Insufficient Attention to Social Differentiation

For decades, social scientists have shown the same event (e.g. drought or policy change) can have dramatically different consequences for various groups or individuals, which are mediated by political, social, and economic structures (O'Keefe et al. 1976; Watts 1983; Watts and Bhole 1993). Yet amidst "win–win" transformation narratives regarding solutions to global environmental crises, insufficient attention has been paid to the differential access that different people have to decision- and policy-making processes, capital, and resources, and to how transformation policies and practices are viewed and experienced by different social groups (Corson and MacDonald 2012; Fairhead et al. 2012).

An assumption underpinning many calls for transformation is that the benefits of significant change will be universal. However, cultural and social differentiation means that people are unevenly able and willing to take up opportunities of transformation. For instance, Sovacool's (2012) review of energy transformations illustrates how different countries and groups face different barriers in the uptake of renewable energies. Moreover, transformative actions often involve trade-offs that disproportionately affect already marginalised or vulnerable groups. For example, the financial costs associated with transition to low-carbon energy will have a greater impact on groups such as elderly and poor energy users than on the oil and gas industry (Bickerstaff et al. 2013). Focusing on the proposed Eko Atlantic City adaptation project in Nigeria, Ajibade (2017) demonstrates that the narrative of a positive-sum adaptation ignores a transformed "riskscape" that will further marginalise some groups and future generations. Transformations to nature-based or eco-tourism in areas valued for their biodiversity benefit relatively wealthy tourists and can favour more educated and literate immigrant populations over local farmers, hunters or fishers (Ashley et al. 2000). Similarly, livelihood transformations often reinforce or even intensify gendered inequality (e.g. Adusah-Karikari 2015).

Our argument about the risk of minimising social differentiation extends beyond material concerns to include the political and epistemological implications of homogenising multiple ways of knowing. Consensus around the need for transformation can mask plural notions about what the problem is exactly, what constitutes relevant evidence, and what, therefore, are considered appropriate solutions (Blythe et al. 2017b; Castree et al. 2014). For example, the translation of the English words "climate change" into Inuktitut in northern Canada naturalised it as a biophysical phenomenon (by excluding any reference to pollution, greenhouse gases, or human contributions), thus implicitly encouraging the Inuit to respond to climate change according to a Western scientific epistemological frame that valorises incremental adaptation as opposed to an Inuit frame that valorises restitution, relational justice, and healing (Cameron et al. 2015).

Social differentiation and disaggregation must be made central to the work of scholars who study transformation and practitioners who advocate for, and aim to support, transformational change. It is crucial that this work be undertaken with careful attention to the ways that vulnerable or marginalised social groups *already* use, benefit, and derive well-being from resources and to how that might change under different regimes of access under transformative change. Insufficient attention to diverse aspirations threatens to undermine the whole transformative agenda by removing what is arguably one of the central emancipatory tenants of transformation, namely the discovery of radically alternative futures (Braun 2015; Castree 2015; Swyngedouw 2010).

Risk 4: Transformation Discourse Can Exclude the Possibility of Non-Transformation or Resistance

Conflict and people's resistance to change initiatives, particularly those devised by others, is a critical but under-emphasised consideration in emerging transformation discourse and practice. As Hornborg (2009:252–254) controversially argued, sustainability science emphasises consensus and thus fails to address larger issues of conflict or opposition:

> The rallying-cry of the early 21st century is not "revolution" (as in the early 20th century), but "resilience" … There is no mention of power or contradiction in the so-called "analytical framework" for understanding social-ecological systems.

However, we suggest that transformation discourse does not deny the existence and utility of conflict but it can underplay the role of resistance and potentially high levels of conflict in transformation processes. In particular, the role of resistance and conflict in triggering transformation at higher levels of the system are under-recognised. Two seminal papers on transformation from the social-ecological perspective reflect this point. Olsson et al. (2006:16), for example, suggest that "differences are good, polarisation is bad" and promote open channels for expressing dissent and disagreement, perhaps giving less emphasis to the probability that the channels for dissent and disagreement themselves represent an outcome or reflection of conflict. Biggs et al. (2010:13) posit that "transformations may be more likely, and are more likely to be lasting, if initiated before high levels of conflict set in".

By contrast, critical scholars emphasise the significance of resistance for catalysing or blocking systemic transformation (Brown 2015). These scholars perceive resistance as the ability to resist change through strength, self-determination, agency, and power. In this sense, resistance may be associated with political or social movements and can play a protective role that counters hegemonic discourses of transformation and perhaps moots alternative or opposing transformation. It could, therefore, be the site for initiating the early stages of a transformative process, rather than something to be discouraged (MacKinnon and Derickson 2013; Moore et al. 2014). For example, resistance might be the "local" response to externally imposed transformation or to changes that are illegitimate, unfair, and inequitable, as documented in Pascual et al. (2014) with respect to conservation and payments for ecosystem services. Small-scale fishers, Pinkerton (2017) argues, resist externally driven neoliberal policies intended to transform fisheries through implementing local alternatives. Pacific Island nations have used global policy forums to voice their resistance to relocation and shift the responsibility for transformation back onto carbon emitters and the global North (McNamara and Gibson 2009).

Following Hurricane Katrina, Tracie Washington, a human rights lawyer with the Louisiana Justice Institute, responded to policymakers who commended the resilience of the New Orleans community with posters that read: "stop calling me resilient: because every time you say 'oh they are resilient' that means you can do something else to me". Through this campaign, she staged a powerful form of resistance to a policy discourse that had gone largely unchallenged (Kaika 2017). A shift in focus towards resistance also serves to highlight that powerful actors who stand to lose from transformations towards sustainability may also actively fight change. In the UK, for example, entrenched coal, gas, and nuclear regimes are exerting their power to actively resist the spread of renewable energies (Geels 2014). Whether opposition entails grassroots social movements or the inertia of powerful fossil fuel actors, we argue that resistance is a critical component of transformative change that needs to take a central position in transformation research and practice.

Risk 5: Insufficient Treatment of Power and Politics Threatens the Legitimacy of Transformation Discourse

Transformation is rarely a clear-cut, one-step change. Rather, transformation is messy, fraught, contested, and happens at different scales and in different domains (Westley et al. 2017). Current policy and, to an extent, scientific discourse around global environmental change emphasise the necessity and desirability of transformations in energy and production systems, in resource use, access to and distribution of wealth and health, in decision-making and governance, and indeed of world views, ethics and values. The literature and tone is generally optimistic and normative. It presents transformation as inherently good and largely defines what is legitimate and justifiable knowledge and practice for transformations to sustainability.

Our final risk therefore concerns the failure to recognise that political processes underpin transformation, which intrinsically involves shifts in power (Morrison et al. 2017). This is true whether the transformation is about change in vegetation or cropping patterns, a re-distribution of species, or a socio-political regime. Each of these changes result in a new set of human–nature relations, a re-distribution of benefits and costs with resultant winners and losers, and a set of trade-offs. It is therefore necessary, always, to ask a series of questions about transformation, such as, who gains and who loses, who has agency and who decides about the trajectory, rate and scale of changes? Power dynamics underscore the ability of people and communities, institutions and social ecological systems to deal with change and to negotiate and steer transformation, yet many commentators suggest power dynamics are under-emphasised and poorly understood in global change science (Fabinyi et al. 2014). In Karen O'Brien's words:

> human geographers have failed to shift the focus of the scientific discourse away from "the environment" as the problem and towards an integrated understanding of change based on critical research on space, place, politics, power, culture, identities, emotions, [and] connections. (2013:593–594)

Mark Pelling's work puts power and politics at the centre of analysis of transformation and adaptation. He suggests that "crises of legitimacy" proceed political regime change, and that disasters may provide triggers for these changes which shift the balance of political or cultural power in society (Pelling et al. 2012:58). Ultimately, Pelling et al. (2012), present global environmental change as one facet of a crisis of capitalism; they use Norgaard's (2006) concept of co-evolutionary development, and Harvey's (2010) call for a co-revolutionary agenda, to understand how and why structural, social, political and other factors (such as technology) interact to maintain the status quo, or rarely, to allow a major shift in regime. They conclude that despite windows of opportunity, or even lessons from history, "the space for action is relatively small because both those with power and the marginalised are wary of the instability they anticipate from significant social change" (Pelling et al. 2012:8). Thus, power not only undermines the legitimacy of transformation, it also militates and often actively works against it.

Towards a "Brighter" Side of Transformation

Momentum to foster systemic transformations to sustainability is building. Yet, more research in this area is visibly warranted, which presents a host of new challenges and opportunities for social scientists. Here, we reflect on the direction in which future research and practice could promisingly head. From our perspective, critical scholars who are making intellectual advances in two important areas: the *politicisation* and *pluralisation* of transformation discourse.

First, the politicisation of transformation discourse can serve to mitigate the risks examined in this manuscript. By politicisation, we mean that researchers, policymakers, and practitioners aiming to support transformations become more transparent about the political nature of transformation discourse and practice. Recognising the political nature of this "dangerous word" is essential since it has become a driving narrative in global sustainability initiatives such as the United Nations' SDG and the Intergovernmental Panel on Climate Change.

Human geographers are already contributing important voices to the politicisation of transformation narratives (Swyndedouw 2010). For example, Bruce Braun recently led a special feature in the *Annals of the American Association of Geographers* focusing specifically on the politics of transformation that asks "from where, by whom, and in what ways transformations towards a just and liveable planet should be generated" (Braun 2015:242). The diverse and innovative papers in the feature direct critical attention to issues of power, authority, and politics in transformations. For example, Cameron et al. (2015) demonstrate how translation from English into Inuktitut removes humans as causal agents of climate change, and reflect on how this politics of language shapes climate futures and priorities.

Taking a different approach, Pelling et al. (2015) propose a framework that casts transformation as a political decision point. Their approach builds on David Harvey's notion of activity spheres and renders multiple framings of transformation, and their resulting recommendations, more explicit. Others are articulating policy-relevant framings that interrogate how social difference, trade-offs, power, and politics influence transformative action (Caney 2014; Sovacool 2012). Tschakert et al.'s (2013) framework for Inequality and Transformation Analyses argues for the need to examine the political drivers of inequality that shape transformation processes. Their relational approach provides better traction for assessing the political dimensions of transformation and is an example of the innovations being offered by social scientists.

Second, we suggest that the pluralisation of transformation research and practice provides a mechanism to safeguard against the appropriation of the term by any single framing or perspective. Emphasising plurality is particularly important for environmental sustainability discourse since contributions from the social sciences are largely dominated by environmental social scientists with positivist epistemologies (Castree et al. 2014; Pelling 2014). We argue that the inclusion of multiple framings of transformation, particularly from those who are sceptical of the notion, is essential for ensuring that transformative research and practice engages with the root causes of unsustainable practices, social inequality and injustice (Blythe et al. 2017b). Plurality is even more significant given new emphasis on transformational (action) research that encourages scholars not only to co-produce knowledge with communities, industries, and governments, but also to act directly as change agents in transformational processes. By promoting the inclusion of diverse voices, including those from beyond the academy including literature, film, art, and social and cultural movements, among others, critical scholars may help to mitigate the risks described above and contribute towards imagining and realising radically different futures (Hawkins et al. 2015; O'Brien 2013). We support Clayton (2014:176) who challenges us to consider: "how and on what basis … are different meanings of transformation built and sustained?"

Transformation towards sustainability remains a field that has yet to be charted, rich with possibilities for development, and we argue that the politicisation and pluralisation of transformation research and practice remains a critical frontier. There is a need for scientists, policymakers, and practitioners to continue to engage, debate, and explore different options that can guide the practice of transformation, particularly through making the space for imaginative alternatives pathways that "exceed the merely material and technical and which instead embrace enthusiastically the political, ethical, and spiritual" (Hulme 2015:324).

Conclusion

It is not the intentionality of language that creates meaning, relationships of power, or practices. Rather, the translation and interpretation of language has power-laden effects regardless of intent (Foucault 1980). No particular perspective owns the notion of transformation and neither do individual users of the term bear responsibility for the broader context within which others take up, adapt, or develop their work. Nevertheless, the *dark side* of transformation, by which we mean the risks associated with discourse and practice that constructs transformation as apolitical, inevitable, or universally beneficial, has the potential to produce significant material and discursive consequences. As Pelling (2014:4) articulated, "it is important not to lose sight of the rationale for invoking transformation and to guard against its diminution and mainstreaming", and we would add its contortion or manipulation to mask for less than transformative means.

Transformation research that forecloses analysis of the social, cultural, spiritual, and political dimensions of responses to environmental change risks promoting palliative responses that address the symptoms, rather than challenging the root causes, of vulnerability or global environmental change (Eriksen et al. 2015). Our hope in highlighting some of the latent risks associated with the *dark side* of transformation is that we might influence this discourse and practice. Ultimately, we aim to stimulate closer consideration of key lacunae in emerging discourse and practice, including the diverse social, structural, and political dimensions of transformations towards sustainability, and by doing so contribute to the possibility for genuinely radical change.

Acknowledgements

We gratefully acknowledge the helpful comments from three anonymous reviewers. JB's work was supported by the Australian Centre for International Agricultural Research grant (FIS/2012/074) and the Australian Research Council. NJB acknowledges support from a Banting PDF and the OceanCanada Partnership. A portion of M-LM's time was supported by funding from Sida for the GRAID programme at the Stockholm Resilience Centre, Stockholm University.

Endnotes

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