

How long can we keep doing this? Sustainability as a strictly temporal concept

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Published online: 11 December 2015
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Abstract Sustainability has become both an increasingly prominent societal project and a central object of study. At the same time, the concept's purview has grown to encompass not only issues that bear directly on humanity's ability to endure, but an increasingly value-laden set of ideas such as social justice. We argue that this conflation of the functional and the normative in established conceptualizations of sustainability is a problematic trend for several reasons. First, it has obscured a common sense understanding of sustainability squarely focused on the ability of a given system or practice to persist across time. Second, by shifting the focus from that which can objectively endure to that which should subjectively be preserved, recent conceptions of sustainability encourage a tendency toward the expansion of sustainability's purview, often along increasingly ideological lines. Third, by diffusing a core substantive focus on temporal durability and incorporating increasingly normative social prescriptions, we suspect that many conceptualizations of sustainability have alienated potential allies, conveying to them that a vote for sustainability is ultimately a vote for a slew of progressive causes. Further, as prescriptive conceptions of sustainability promote coalitions among groups who do have common

goals, the moral basis of those goals provides traction for ideologically opposed groups to forestall fundamental functional reforms on the basis of their association with less critical normative issues. Subsuming normative considerations under the banner of sustainability may ultimately be more detrimental than beneficial for achieving the most pressing functional goals upon which most normative goals themselves depend.

Keywords Sustainability · Resilience · Environmental politics · Temporality · Socioecological systems

Introduction

Three decades after the United Nations' *Our Common Future* (WCED 1987) introduced the concept of sustainable development into the popular lexicon, the more general concept of sustainability has become a prominent theme in academic, policy, and public discourse. Yet, as a term, if not as a concept, the banner of sustainability may be doing as much harm as good for the multitude of substantive interests that increasingly fall within its purview. Since the publication of *Our Common Future*, the United Nations itself has acknowledged that global progress toward sustainability has been modest at best and that humans have been approaching planetary ecological limits with increasing speed, in some cases having already surpassed them (UN DESA 2012). As the dominant frame through which ecological issues are discussed, understood, and acted upon, sustainability as presently constituted has proven inadequate as a basis for effective policy in the face of mounting ecological degradation (Foster and Clark 2012; Meadows et al. 2004; Wackernagel et al. 2002). Benson and Craig (2014) have thus recently proclaimed the "end of sustainability" on the basis of its apparent failure as a logical basis for policy.

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In this paper, we argue that one important but largely neglected source of sustainability's current challenges stems from the excessively broad and ever-expanding definitions that modern sustainability scholars use to conceptualize it. In particular, we question and critique the wisdom of an ongoing trend whereby sustainability scholars increasingly incorporate *normative* conceptions of sustainability, concerning the moral desirability of human practices, into *functional* conceptions of sustainability focused more strictly on the temporal durability of such practices. We see this trend as problematic for several related reasons. First, it has obscured a common sense understanding of sustainability squarely focused on the ability of a given system or practice to persist across time. Discourse surrounding complex issues like sustainability is certain to generate heated debate under the best of circumstances, but when one party takes for granted a normative conception of sustainability while a second takes for granted a functional conception, their discourse is likely to become more confusing, more contentious, less enlightening, and ultimately less useful. Second, by shifting the focus from that which *can* objectively endure to that which *should* subjectively be preserved, recent conceptions of sustainability encourage a seemingly endless tendency toward the expansion of sustainability's purview, often along increasingly ideological lines. While it may certainly be difficult for multiple parties to achieve consensus about such issues as how long humanity can continue to depend on fossil fuel, it becomes all the more difficult to achieve consensus about purely normative issues like the meaning of social justice, let alone about what normative issues merit the collective action often needed to foment fundamental social change. Third, by diffusing a core substantive focus on temporal durability and incorporating increasingly normative social prescriptions, many conceptualizations of sustainability have alienated potential allies, conveying to them that a vote for sustainability is ultimately a vote for progressivism, as if advocating for solar power somehow entails support for gay marriage, gun control, or perhaps even authoritarian strains of socialism.¹ Insofar, as dominant conceptualizations of sustainability link functional concerns like the objective reality of climate change inextricably to normative concerns like fair wages, this "bundling" of goals may be counterproductive for building the political consensus necessary for addressing pressing ecological issues.

To be clear, however, we do *not* argue below for a purely ecological sustainability, nor do we argue for a conception of sustainability devoid of normative considerations. Rather, we call for a conceptualization of sustainability whose primary focus is the ability of a given system or practice to persist

across time. Given their fundamental bearing on all human activity, ecological concerns may serve as an archetypal example of the temporal sustainability that we advocate, but others abound. It may be, for instance, that some political systems, some economic systems, or even some systems of justice are more likely to persist over time than others. In light of the above three concerns, however, we argue that including such issues within one's conceptualization of sustainability can be problematic if there does not exist compelling, and preferably empirical, reason to believe that they bear directly on the durability of socioecological systems. Further, while we argue that concerns bearing directly on humanity's survival generally take logical precedence over normative issues like social justice (which become moot in the event of wholesale ecological collapse), we readily acknowledge that humanity's survival is but one collective goal among many and that it must be weighed against various others. Reversing destructive ecological trends, for example, might, at some point, require such drastic and unjust measures that it might be better to perish, choosing morality over survival. We state from the outset, therefore, that we value normative goals like social justice, believing them worthy of both discussion and social action. Nonetheless, our overarching concern remains that subsuming normative considerations *under the banner of sustainability* may ultimately be more detrimental than beneficial for achieving the most pressing functional goals upon which most normative goals themselves depend.

Below, we first outline the recent history of the term sustainability, contrasting it with our more narrow understanding of the term ([What is sustainability?](#)). We then focus on the distinction between functional and normative aspects of sustainability (["Why is the broadening conceptualization of sustainability problematic?"](#) section) before offering an organizational explanation for their conflation (["How did we get here?"](#) section). We then explore the practical and political drawbacks of current trends in sustainability discourse (["The challenges of modern sustainability as progressive utopia"](#) section) before making suggestions for how both functional and normative goals currently subsumed by the banner of sustainability might be more fully accomplished by limiting sustainability largely to the former and conceptualizing the latter under alternative frameworks (["Where to from here?"](#) section). Even if Benson and Craig (2014) are correct in proclaiming that sustainability is dead, the argument elaborated below might serve as a forensic post mortem, providing insight for the future management of risks that impinge directly on how long the human species is able to persist.

What is sustainability?

Arguably, the most common usage of the verb sustain among the general public is "to continue" (as with biological growth)

¹ For examples of objections to the perceived ideological function of sustainability, see http://www.mindingthecampus.org/2008/04/the_worst_campus_codeword/ and <http://www.startribune.com/sustainability-can-be-a-warm-fuzzy-word-that-invites-tyranny/30827054/>. Further examples are found in Table 1 and ["The challenges of modern sustainability as progressive utopia"](#) section.

or “to maintain” (as with a musical note). Inherently, “sustain” simply means to keep going, irrespective of the direction in a normative sense (positive, negative, or neutral); sustainability is thus the ability of a given phenomenon to endure. To be clear, we are focused here not on the problems of sustainable development as such (the term popularized by the World Commission on Economic Development) but rather on the concept of sustainability itself. The former refers to a particular condition of *development* (that which “meets the needs of the present without compromising the ability of future generations to meet their own needs”) and has an inherently applied nature as a policy logic, while the latter refers to a set of abstract goals that may or may not be realized in the context of development per se. For example, an individual who plants drought-resistant shrubs in her yard might have sustainability in mind when she does so, but her efforts would not be meaningfully thought of as sustainable development. Sustainable development is also an inherently normative concept by virtue of the inclusion of the term development. Our argument instead focuses on how we think about and understand the condition of sustainability, not on how we attempt to put sustainability into practice in coordinated sustainable development projects (though it may have implications for the latter).

Nonetheless, a brief overview of the concept of sustainability necessarily leads back to the early articulations of sustainable development that gave rise to contemporary visions of sustainability. The publication of *Our Common Future* built on earlier assessments of global ecological overshoot focused squarely on understanding humanity’s total rate of material throughput (e.g., Meadows et al. 2004) and ushered in an era characterized by the increasing usage of sustainability in popular discourse, scholarship, and practice. Among others, Kelly (2009), Kates et al. (2005), and Mebratu (1998) provide detailed overviews of the institutional foundations of these concepts, in which the UN has played a prominent role. Briefly, *Our Common Future* linked together ecological and developmental goals with the framework of sustainable development, and this formulation was rearticulated at the 1992 UN Conference on Environment and Development in Rio de Janeiro, which produced the action plan Agenda 21. The 2002 World Summit on Sustainable Development broadened the concept of sustainable development, introducing the three-pillared model—environmental, economic, and social—that continued to form a working basis for the 2012 UN Conference on Sustainable Development and resultant Sustainable Development Goals. This tripartite model undergirds the dominant conceptions of sustainability explored below even as some later studies have retained a focus on biophysical indicators of sustainability (e.g., Wackernagel et al. 2002).

In the early 2000s, Kates et al. (2001) and Clark and Dickson (2003) outlined the emergence of a research and application program in response to these and other articulations of the need to reconcile human goals with ecological limits

that they termed *sustainability science* (see also Kajikawa 2008). As outlined initially by Kates et al., the emergence of the field represented the incorporation of the science and technology community into the political processes that had shaped the sustainable development agenda, and as it has grown (Bettencourt and Kaur 2011) the field today reflects a model of sustainability inherited from those largely UN-driven efforts, with its focus on understanding interactions between natural and social systems as they relate to “meeting the needs of present and future generations while substantially reducing poverty and conserving the planet’s life support systems” (see Kates 2011).

Sustainability may be usefully contrasted with the related concept of resilience by the former’s focus on continuity and stability and the latter’s on adaptive capacity in the face of inevitable disturbances and change (Benson and Craig 2014). In a resilience framework, disturbances may result from social, economic, or environmental change (Adger 2000) all of which are viewed as an ever-present reality of socioecological systems (Davidson 2010). A system is resilient to the extent that it can withstand such disturbances without undergoing fundamental changes to its basic structure, functioning, and identity or suffering maladaptive responses to change that reflect insufficient adaptive capacity (Folke et al. 2010; Lyon 2014; Walker et al. 2004). While the two concepts are distinct, one may find within the resilience literature conceptualizations of sustainability that focus squarely on the ability of a system to endure (e.g., Davidson 2010; Holling 2001). These may point to qualities of social systems themselves such as “the capacity to create, test, and maintain adaptive capability” (Holling 2001 p. 399) or more subjective dimensions of the future such as an acceptable quality of life (Davidson 2010).² Given the particular difficulty involved in generating consensus about issues like the latter, some have argued that a resilience framework is a more promising basis for policy than sustainability. Among other strengths, resilience necessitates a more transparent consideration of values (Benson and Craig 2014). Moreover, sustainability is inherently limited as a concept given that, historically, all systems have ended even as they have varied in longevity (Davidson 2010).

The above challenges, however, pale in comparison to those posed by the conceptions of sustainability to which we now turn. Thompson (2007) usefully delineates conceptualizations of sustainability rooted in the socioecological system tradition (focused on resource sufficiency or functional system

² In her thoughtful critique of the concept, Davidson defines sustainability as “A systemic state of indefinite equilibrium, in which levels of anthropogenic material consumption and waste production remain below the threshold productive and absorptive capacities of the ecological system, while at the same time ensuring a quality of life that is considered acceptable by current and future members of that social system” (p. 1136).

integrity) and contrasts them with “non-substantive” uses of the word. The latter simply rhetorically links environmental degradation to social concerns such as justice and equity. Whereas the former directly threatens a system’s temporal endurance (i.e., all social and economic systems depend on ecological ones), the latter may not. Table 1 summarizes a few key dimensions of the ways that the term sustainability is used across the fields discussed here. The characteristics of each field were determined primarily on the basis of a review of sources such as academic publications, reports, news articles, and university and non-profit organization websites. We are not claiming that the examples noted in Table 1 constitute a statistically representative sample of usage in each field; such an analysis is beyond the scope of the present paper. However, Table 1 represents an empirically grounded if broad assessment of variation in the usage of sustainability across different fields. Non-substantive working definitions of sustainability abound in scholarship and praxis, to one extent or another emphasizing concerns such as social equity and cultural infrastructure, social justice, and a better future, “that which sustains us” including art and “the good life,” and prosperity and justice. Likewise, the well-known “triple bottom line” framework incorporates a focus on social equity alongside economic and ecological concerns. Some definitions treat *social sustainability* as a concept distinct from economic and ecological sustainability, though these often focus on ideals such as justice, dignity, participation, positivity, harmony, and/or human rights. Still, others hold that ecological, economic, and social dimensions of sustainability cannot be meaningfully discussed as separate entities.³ Ironically, what most appears to unite these varied visions of sustainability may be their failure to explicitly situate temporal endurance as a conceptual cornerstone.

If sustainability is to be a useful concept moving into the future, for reasons elaborated below, we argue for the adoption of a more restricted conception of sustainability squarely centered on temporal endurance. Our primary but by no means exclusive motivation is the reconciliation of human social and economic systems with planetary ecological limits. Hence, contra the examples above, we argue that sustainability studies, strictly construed, should consider questions regarding how long a system can continue to exist,

³ For example, according to <http://blueplanetunited.org/2011/10/>, “Strictly speaking, there is no such thing as ‘environmental’ sustainability; only sustainability—an irreducible synergy of social justice, ecological health, and economic vitality, applied across present and future generations. Although the health of our ecological life support system is logically prior to and dominant among sustainability imperatives, maintaining the health of ecosystems on a human-dominated planet requires achievements in social welfare and economic vitality that are imperatives in their own right, and not just for environmental protection. Hence, sustainability should be embraced as a primary concept. It cannot be reduced coherently to environmental, social, and economic components.”

regardless of how it diverges from important social principles, unless those principles can be demonstrated to be vital for the continued endurance of the system in question. This vision of sustainability, while perhaps seeming atavistic to some, is more consistent with what Thompson (2007) refers to as the system modeling approach and may represent what Vucetich and Nelson (2010) would refer to as “vulgar” (as opposed to “virtuous”) sustainability. Our argument is not that the goals and values contained in non-substantive conceptualizations of sustainability are unimportant or even that they are less important in a general sense than economic durability or ecological integrity. Nor do we contend that ecological and social goals cannot be pursued concurrently; the ways in which both sets of goals can be facilitated by, for example, certain forms of community design have certainly been illustrated (see, e.g., Rogers et al. 2012). Nonetheless, both the functional goals central to our restricted vision of sustainability and the normative goals central to some alternative visions may *both* be prone to gain greater traction as societal projects if the latter were subsumed under a rubric other than sustainability.

Why is the broadening conceptualization of sustainability problematic?

As we note above, common parlance appears most often to describe a given phenomenon as “sustainable” on the basis of whether that phenomenon has high or low potential to endure or persist across time. Thompson (2007) points out that sustainability is not equivalent to norms like democracy or social justice, and it should not be presumed that the achievement of such norms results in sustainability. To be clear, we reiterate our appreciation of such moral goals as a “leveling of the playing field” with respect to social equity. At the same time, we question the wisdom of including such calls within the purview of sustainability. At best, doing so renders the term’s meaning of constantly moving target, thus obfuscating its core mission. At worst, the resulting semantic confusion impedes fundamental efforts to preserve a field on which to play at all. Rather than sustainability per se, most of the definitions outlined above deal with questions of the kind of society that should be sustained. For example, Vucetich and Nelson (2010) even after acknowledging Thompson’s claim that sustainability and justice are not necessarily logically connected, assert that a sustainable society has concern for fair and equitable social interactions. The notion of what is equitable will likely remain a topic of debate indefinitely (as well it should). Therefore, if a given conceptualization of sustainability begins with the premise that justice (or some other subjective value) is a prerequisite for sustainability’s achievement, discourse concerning sustainability may become mired at the starting gate amid potentially endless debate concerning the nature

Table 1 Broad overview of the usage of “sustainability” and related terms across several applied and academic fields

Field	Temporal focus	Normative vs functional	Normative emphasis	Terminology	Examples
International policy Sustainability science	High	Both	Development	Sustainable development	UN DESA (2012); UNEP (1992); WCED (1987)
	High	Highly functional	Poverty reduction	Sustainability	Kates (2011); Clark and Dickson (2003); Holling (2001); Kates et al. (2001)
NGOs	Low	Highly normative	Justice Equity	Sustainability Sustainable development	BlueGreen Alliance (2015); CSPA (2015); Bryn Mawr College (2015); Coote (2014); Hempel (2011); Hartley (2009)
Social movement organizations Universities					
Academic institutes Sustainability studies	Low	Highly normative	Justice Equity Culture Arts	Sustainability Sustainable X (i.e., art, music)	AASHE (2015); Arizona State University (2015); INSS (2015); University of New Hampshire (2015); University of New Mexico (2015); Stony Brook University (2015); Middlemiss (2011); Scerri and James (2010); Sepe (2010); Gilderbloom et al. (2009); Dale et al. (2008)
Conservative groups	NA	(Perceived as) Highly normative	(Chief objection to) Justice Equity	(As signifier of progressive values) Sustainability Sustainable development Sustainable X	American Policy Center (2015); Democrats Against UN Agenda 21 (2015); Tea Party 911 (2015); Beck (2015); Celock (2013); Mencimer (2011); Kersten (2008); Leo (2008); Peterson and Wood (2015)

The bottom row highlights groups for whom sustainability has become a signifier of progressive activism

of justice and/or about whether a litany of existing social situations qualifies as just. In practice, for example, visions of sustainability that require democracy as a prerequisite for sustainability's achievement have to date largely underspecified the relationship between democracy and sustainability. Yet, contrasted against the short-term and individualistic nature of democratic capitalism, authoritarianism might well be the most effective way to address such issues as ecological collapse because of its ability to carry out radical societal restructuring in relatively short order.

We are not suggesting that sustainability studies should be artless projects in ecological social engineering. Rather, we submit that highly speculative assumptions regarding the critical contributions that progressive values make to sustainability risk undermining the core mission by adding unnecessary confusion. Consider several further examples. First, conceptualizations of sustainability that focus on the “right” (i.e., Western, industrial, cosmopolitan) lifestyles and consumption patterns may render the materially sustainable practices of the world's poor or other disadvantaged groups invisible (Mincyte 2011, 2012). Yet, even as the global poor “enjoy” far more sustainable lifestyles than the global rich thanks to their lower rates of consumption, this typically comes with serious hardships. Assuming a broad (i.e., normative) vision of sustainability was to bypass endless debate about what constitutes justice, what conceptual exchange rate would it use to weigh these low rates of consumption against the putatively unjust amount of suffering among the global poor in question? Assuming that such an exchange rate is in principle discoverable, how much time and effort might be required to determine it, and how likely is it that scholars embracing normative visions of sustainability would come to any semblance of consensus concerning what it should be? How might they go about measuring the two concepts in order to determine the exchange rate at all?

Similarly, consider a normative vision of sustainability that calls for the preservation of indigenous cultures. In this case, aside from the potential problems outlined above, how might we rank the relative value of a given cultural practice against the comparatively difficult (and potentially short) lives that could conceivably be associated with that practice? Or if a broad vision of sustainability requires appreciation of the arts for the achievement of sustainability, is the cost of busing people into the city to attend an opera (in the real-life example of an event put on by a sustainability institute housed at a public university) worth resources that might, otherwise, be used to, say, research new energy sources? Perhaps more importantly, is the political cost of publicly expending such resources under the rubric of sustainability—as witnessed by unsympathetic politicians and citizens—worth it in a time of relative austerity? Our argument is not that global poverty, indigenous culture, or the arts are unimportant. Rather, it is simply that pursuing normative goals under the moniker of

“sustainability” rather than under some alternative banner leads to conceptual problems that may slow progress on both the functional and normative goals that ostensibly underlie broad visions of sustainability.

The above is not to say that we unilaterally reject the inclusion of issues like justice, indigenous culture, or the arts in our streamlined conceptualization of sustainability. Rather, we omit them only insofar as they fail to impinge directly on humanity's temporal durability. As Connelly (2007) points out, the conflation of environmental protection with social justice and democracy is generally not based on a self-evident or even logical connection but rather reflects choices made about possible policy goals (e.g., Magee et al. 2013). Typically, broad conceptualizations of sustainability incorporate issues like social justice via normative claims about their concomitant value, alongside temporal durability, as desirable outcomes. Across many of the examples cited in this paper, functional claims asserting a direct causal link between such outcomes as social justice and temporal persistence are either absent or unclear (see Langhelle 2000 for a discussion of such normative versus functional claims).

In principle, however, there are at least two ways in which our streamlined conceptualization of sustainability allows for (and potentially requires) a functional inclusion of otherwise normative issues. First, it may be that a particular set of societal conditions, like deep inequality or injustice, is inherently unamenable to long-term persistence. This possibility, however, seems predicated on deeply optimistic assumptions about the indomitability of the human spirit and the ability of marginalized groups to overcome oppression and suffering. Indeed, humans appear just as capable of sustaining abject oppression as they are of effective mobilization in the face of inequalities. From a radical theoretical perspective, of course, Marx devotes the bulk of his analysis in *Capital* to explaining why capitalism is not sustainable; the inequality endemic to it produces crises that lead to its end (see, e.g., Harvey 2014). Here, inequality directly relates to temporal sustainability even though Marx does not necessarily view biophysical concerns as one of the proximate causes of capitalism's evolution to reduce structural inequality (but see Foster 1999). It is some threshold level of inequality, and not necessarily injustice, that is unsustainable. While injustice will subsume inequality for some people, it will not for many others. Further, while inequality is also quite amenable to reliable measurement across person and culture, social justice is not. Hence, there may be a case for including greater equality (whether of opportunity or of outcomes) within our streamlined conception of substantive sustainability, but the case for social justice seems decidedly weaker.

Second, a given normative practice might fit into our streamlined conception of sustainability insofar as it impinges on underlying ecological conditions—the archetypal driver of temporal (un)sustainability. Were there clear empirical

evidence suggesting that a given set of normative values impinges directly on a social system's ability to persist across time, those values would then fit logically into our streamlined vision of sustainability and would be less prone to produce the types of problems that we describe above. Yet, without a stronger empirical foundation, the implication that justice and equity are vital for ecological sustainability seems problematic. Clearly, there are correlations between inequality and environmental degradation, but correlation sometimes appears to be treated as causation (see, e.g., Agyeman 2008). Nevertheless, the assertion that intragenerational ecological justice at a minimum facilitates intergenerational ecological justice is fairly widespread and influential (see Glotzbach and Baumgartner 2012), and while recent simulations suggest that societies may collapse due to high economic inequality *or* resource depletion (Motesharrei et al. 2014) we cannot presently call equity or justice necessary preconditions for ecological sustainability.

In any case, indexing ecological sustainability to justice not only creates unnecessary disagreement and functional claims that may exceed available evidence, but it is often built on underdeveloped and contentious theories of justice. Theories of sustainability might make explicit their underlying social and political commitments, but in practice, they rarely do so. Instead, they often smell to many of thinly veiled progressivism. Given this, we should not be surprised when political conservatives view sustainability as a kind of Trojan horse through which activists inject anti-business and pro-regulation sensibilities into the ever-increasing domain of policies claimed by sustainability studies (see “Introduction” and “The challenges of modern sustainability as progressive utopia” sections for examples). Thus, aside from unnecessarily muddying sustainability's conceptual waters, broad definitions of the concept may alienate a subset of potential allies amenable to critical issues of human survival (e.g., climate change) but who are ultimately turned off by the perception that sustainability is ultimately little more than a marketing term for any number of ostensibly progressive causes. Stated differently, forcibly injecting the concept of sustainability with normative baggage that does not impinge directly on humanity's ability to persist risks doing for the left what terrorism does for the right, with opportunistic social activists huddling behind the banner of ecological issues like climate change while advocating for all sorts of hot button causes that will seem, to many, rather far removed from arguably more critical issues. While an investigation of this hypothesis is beyond the scope of this paper, we suspect that this dynamic may play a role in public perception of scientific consensus on climate change as false or conspiratorial (see Klein 2011).

So long as it maintains its capacity to endure over time, any socioecological system—no matter how distasteful or even horrifying its form of organization—is sustainable in the most common sense of the word. A majority across the political

spectrum can agree that maximizing the sustainability of humanity (minimally construed as preventing ecological collapse) is a valuable objective. Yet, even from our vantage point, ecological sustainability is not *the* goal. Rather, it might be more accurately described as a constraint on the achievement of other goals like social justice (Holland 2008; Marcuse 1998). Much of humanity might in fact prefer to perish over enacting the sorts of policies required to live sustainably. However, to the extent that particular social conditions might be essential to the achievement of temporal sustainability as outlined above, those linkages must be demonstrated much more carefully and explicitly than they have to date. Even then it does not follow that the one necessarily forms a crucial element of the other. In utilitarian terms, sustainability would be but one aspect of Bentham's (1961) utility calculus. “Durability,” as Bentham described it, needed to be considered alongside various other measures such as intensity and certainty in order to predict the utility of a proposed policy, all things considered. We might, for example, find that an ecologically minded totalitarian state could manage natural resources exceptionally well for an indefinite period in part because it severely restricted the reproductive freedoms of its population or caused intense suffering to minority groups enslaved to toil in eco-labor camps building solar panels. Would it be worth it to mitigate ecological problems at the expense of such suffering? Here, we see how sustainability competes with many values and it should not be enthroned as the “ultimate value” without considerable argument. Terrible things can last for a very long time, and their sustainability makes them even more terrible. Sustainability as we are outlining it here (and as understood by most of the public), like resilience, is not necessarily a virtue in its own right.

How did we get here?

By conflating temporal sustainability with culture and ethics, many scholars and practitioners have added vagueness and subjectivity to the concept while threats of ecosystem collapse continue to mount. Often, the insistence that social conditions such as justice are necessary for the continued existence of a system (or that functional issues surrounding humanity's endurance are not amenable to academic inquiry absent an explicit appeal to normative issues like justice) is based simply on appeals to what is now established as tradition. But, on what basis did such assertions arise? Thompson (2007) refers to two main groups that use the term sustainability in non-substantive ways: the “mildness” camp, who use it to convey approval or disapproval, and the “banner” camp, who use it to build coalitions around social causes. Similarly, we understand the increasing non-substantive usage of the term sustainability to be largely a product of strategic organizational action.

We are not arguing here that ecological and social goals are incompatible, merely that the incorporation of goals like justice into the conceptualization of sustainability has occurred according to a fundamentally organizational (versus substantive) logic, occurring as it has in the context of a heavily professionalized environmental movement (Brulle 2010; Skocpol 2003). We hypothesize that, since the late twentieth century, various social movement organizations working toward largely distinct goals (e.g., environmental protection, justice, or job growth) have made strategic decisions to incorporate the mission of others into their own, thus mutually increasing membership and funding (e.g., the BlueGreen Alliance⁴). As a result, the conceptual relationships contained in a normative sustainability have become institutionalized and legitimated, and we have now reached a point where the logical necessity of justice, along with any number of other normative concerns, as preconditions for sustainability appears to many as self-evidently true. We suggest that this process—and not an overwhelming preponderance of empirical evidence or a clear conceptual logic—has been a driving force behind the broadening of sustainability’s purview, with sustainability serving essentially as an ideological bridge with which to unite varied social movement organizations (see Gould et al. 2004). Sustainability’s conceptual enlargement seems to have been in part a product of coalition building, with organizations strategically broadening their use of the term and embracing its rhetoric in order to secure material resources and political support (see, e.g., Pfeffer and Salancik 1978).

On the academic side, we suggest that the above dynamic has become further compounded as more and more disciplines have attached themselves to the banner of sustainability with the goal of increasing their own status and access to often-limited academic resources. The centrality of various fields such as art, anthropology, ethics, literature, film, music, cultural studies, and women’s studies to sustainability studies per se can sometimes seem tenuous on its face, and we suspect that an increasingly broad conceptualization of sustainability has served as a means of hitching financially tenuous academic wagons to one that may be more financially robust or at least is trending in a more positive financial direction.⁵ We value these fields’ contributions to scholarship tremendously and frankly applaud those that have found strategic ways to ensure their own persistence across time. However, we submit that increasingly non-substantive conceptualizations of sustainability have allowed more disciplines to declare their own relevance to pressing ecological issues, and these declarations have in turn broadened the concept in a mutually

reinforcing cycle. Institutionally, we suspect that as universities have come to see sustainability as a *de rigueur* area of study due to their competitive environments, they have cobbled together curricula and other resources from what is *available* to them rather than starting with a clear and substantive delineation of sustainability’s most logical boundaries, ultimately enlarging its purview as a by-product of institutional isomorphism (Dimaggio and Powell 1983).

Further, it seems that the mildness camp’s non-substantive use of the term sustainability in part involves the strategic use of science to support value claims, thereby heightening the political import of the term. Here, applying the adjective (*un*)-*sustainable* involves little more than conferring judgment on a given arrangement, with the rhetorical advantage of cloaking value claims in pseudo-scientific discourse. For example, Dale et al. (2008) proclaim the social sustainability of Whistler, BC, to be low because many workers live far from the community, thus separating younger and older residents; it seems that what the authors are primarily conveying here is disapproval of an inequitable and undesirable state of affairs. Quantitative assessments of sustainability can sometimes reflect consistency with characteristics of locales merely viewed as desirable by researchers (see, e.g., Sepe 2010). In other cases, they may rest on a combination of particular aesthetic and lifestyle preferences combined with assumptions that what has existed for several generations necessarily possesses the qualities needed for continued existence into an unknown future (see, e.g., Gilderbloom et al. 2009). Jamieson (1995) points out that the tendency to objectify subjective claims is an ancient one, and if an argument is perceived as objective via the “great cultural legitimator” of science, it may be all the more persuasive. However, given the rhetoric employed, one could reasonably question the scientific basis upon which such claims rest. In some ways, these uses of the term sustainability are akin to “theoretical greenwashing”: the use of scientific discourse rooted in environmental concerns to legitimate value claims.⁶

A similar argument has been put forward with respect to the roles of scientific expertise and normative decision-making around the issue of climate change. In particular, Hillerbrand and Ghil (2008) argue against drawing normative conclusions from climate science alone and posit that scientific prognoses such as potential impacts of climate change on human welfare, which are measurable, should not be conflated with value judgments. We readily acknowledge that value judgments inevitably impinge upon policy decisions in multiple ways, including their influence on what questions are subjected to empirical evaluation. Simultaneously, however, we

⁴ See <http://www.bluegreenalliance.org/apollo/about-the-project> for a discussion of its merger with the related Apollo Alliance in 2011.

⁵ As examples, see, <http://sust.unm.edu/common/docs/REVISED%20SSP%20Advisement%20Form%203-10-14.pdf>; http://www.stonybrook.edu/commcms/sustainability/what_is_sustainability.html; <http://media.ifacca.org/files/DART34.pdf>

⁶ Similarly, Fortune and Hughes (1997) point out that “sustainable has become a magic word that can be attached to other topics so as to lend legitimacy to other agendas” and question the extent to which assumptions are made in non-rigorous manners to achieve this end.

agree that science itself is normatively neutral and should not be invoked as a smoke screen to mask a policymaker's normative assumptions. Unfortunately, the semantic trend that we have outlined above has increasingly rendered the term sustainability something of a smokescreen that uses ostensibly uncontroversial and objective science to conflate a host of substantively disparate moral goals with the more fundamental and widely embraced goal of human survival.

The challenges of modern sustainability as progressive utopia

Is sustainability today a matter of degree based on how consistent something is with how we would prefer the world to be? The term has become increasingly broadened to encompass more and more facets of a particular worldview—in this case a progressive one—and, for many, has become a dog whistle to identify those who advocate for all manner of progressive causes. Given the issues outlined above and current political realities, we are left with serious reservations as to the practical utility of current formulations of the concept despite their origins in attempts to assess and address the fundamental challenge of ecological overshoot (Meadows et al. 2004). Methodologically, this has produced a situation in which we can find attempts to operationalize sustainability with no apparent working definition of the term (e.g., Scerri and James 2010; Sepe 2010) or attempts to measure sustainability as a function of subjects' own claims that given practices are simply *aimed* at reducing environmental or human impacts (e.g., Middlemiss 2011). Clearly, such investigations are of limited utility for determining how long a given phenomenon can be expected to endure—which should be precisely the point. By virtue of their wholesale retreat into the subjective, conceptualizations of sustainability that go so far as to incorporate the arts as fundamental are particularly divorced from this concern. Surely, various aspects of the humanities are effective means to ecological ends. And, of course, the arts can be ends in and of themselves and life without such aspects of culture may not be worth living. But, our point is that conflating the value of cultural goods with the underlying value of avoiding ecological crisis obfuscates rather than clarifies the urgent tasks at hand.

The arts, culture, and values should be involved in the discussion of sustainability. However, that does not mean that they should be considered inherently part of the concept. Culture clearly has an influence on whether we survive as a species (or, more accurately, for how long). It may be, for example, that certain practices or approaches to sustainability issues are more likely than others to promote a culture in which a greater proportion of the population recognizes the urgency of ecological concerns such as resource depletion that have direct bearing on temporal endurance. However, culture's potential

contribution to a more widespread appreciation of sustainability's importance does not mean that one concept necessarily subsumes the other. In the parlance of social scientific methodology, the former as an independent variable may influence the latter, but the two bear what Campbell and Fiske (1959) call discriminant validity.

While we are not arguing for the irrelevance of culture and values to sustainability, we are advocating for clarity with respect to the distinction between those elements of culture that ostensibly impinge on temporal endurance and those that instead make some value judgment about what should be sustained. Further, one can measure with some amount of reliability across place and person how long a given thing can last based on its material characteristics, but one will have a much more difficult time measuring reliably, across place and person, what is culturally desirable or morally justifiable. Of equal importance, the latter is likely irrelevant to most laypeople's understanding of what it means for something to be sustainable. As currently used by those who embrace normative definitions of sustainability, we suspect that the term is simply too broad for convincing a big enough proportion of citizens to care and get involved; achieving a “just” and “good” sustainability seems unlikely if it is primarily academics who are interested in this version of the concept. Injecting values—beyond the largely uncontroversial value of avoiding ecological collapse—squarely into the definition of sustainability therefore seems to us a counterproductive endeavor insofar as it yields unending debate about what counts as good and means that fewer citizens take the concept seriously when buy-in from the largest proportion of the voting public is crucial for the achievement of even a limited version of sustainability.

We speculate that the insertion of value claims into the concept, and thus its linkage—real or imagined—to a progressive agenda, further undermines the political viability of sustainability as an ecologically oriented societal project by providing traction for ideologically opposed groups. As environmental goals—not a fundamentally partisan issue in the USA until the late twentieth century—have become increasingly tied to progressive ideals, they have come to be viewed by many conservatives and some moderates as just another aspect of liberal values and are therefore easily rejected on the basis of political identity. Rejection of science based on conservative values and identity, and perhaps even lifestyle, is becoming more widespread in the context of an increasingly polarized society (Gauchat 2012; McCright et al. 2013).⁷ Of course, conservative segments of society are more likely than others to reject science that focuses on environmental impacts of capitalist production due to the incompatibility of these

⁷ Also see the following for one assessment of growing political polarization in the USA: <http://www.people-press.org/2014/06/12/section-1-growing-ideological-consistency/#interactive>

findings with elements of conservative ideology, chief among them faith in technology and material abundance, and support for continued economic expansion (McCright and Dunlap 2010). Even so, it is reasonable to expect that to the extent that sustainability (a perspective inherently involving impact science) becomes joined at the hip to liberal values and lifestyles, the likelihood of wider societal acceptance of information indicating ecological degradation is diminished. We submit that the incorporation of progressive values thus allows conservatives to mobilize opposition to ecological truth claims on the basis of the objectionable values (and even tastes) to which they are coupled.⁸ We suspect that this is at least in part driving legislative opposition to putting sustainability into practice across the USA. For example, the conservative American Policy Center links sustainability to Marxism by virtue of its emphasis on social justice. According to a recent report by the National Association of Scholars, a conservative advocacy group, sustainability “is an ideology that attempts to unite environmental activism, anti-capitalism, and a progressive vision of social justice” and “politically correct dogma” (Peterson and Wood 2015 p. 19, 151). The United Nations’ non-binding, voluntary plan to implement sustainable development, known as Agenda 21, is commonly seen as a communist plot among members of the American far right. In 2012, conservative commentator Glenn Beck published a dystopian novel titled *Agenda 21*, and the book’s website lists several keywords for readers to look out for as indicators that Agenda 21 is being implemented in local meetings. Justice and equity are notable among them.

Some have argued that a science-centered, systems perspective on sustainability is inherently elitist and exclusionary, inaccessible to most people on the basis of its technicality (see Thompson 2007). However, is a conceptualization of sustainability that hinges on progressive ideals any less exclusionary for members of the public ideologically predisposed to reject them? Compounding this, as sustainability is asserted to be about not merely values but also to hinge on certain patterns of cultural consumption, we fear that the dominant sustainability framework in use today is leading to scholars and practitioners increasingly preaching to the choir. Ironically, then, efforts to build ideological bridges among progressive movements and organizations via sustainability may have resulted in pronounced ideological divisions between that coalition and much of the American public.

Given the most direct threat to *any* conception of sustainability that we face, the already observed weakening and instability of our planet’s ecosystems, we cannot afford overly inclusive and imprecise definitions of sustainability that hinge on concerns such as the “good life.” If it is to carry the practical and academic weight necessary for effective mobilization

and the production of actionable science (Palmer 2012) there should be a renewed focus on the basic meaning of the term. A maximally useful sustainability framework makes empirical assessments possible by situating the analysis squarely within temporal parameters; the key question is not whether something is good or “bad,” but “how long can we keep doing this?”

Where to from here?

We readily acknowledge that even a strictly temporal conceptualization of sustainability is fraught with its own definitional and measurement issues (Benson and Craig 2014; Hamilton 2003). Still, human activity is driving environmental degradation beyond what could be expected to occur by chance (IPCC 2013) while consumption patterns have pushed demands well past the carrying capacity of the planet. The primary goal, then, of sustainability strictly construed is to stabilize ecological support systems and avoid collapse beyond that which might be expected to occur under dynamically stable conditions (e.g., the Holocene). Figure 1 broadly summarizes our current assessment of the relationships between ecological, economic, and social dimensions of sustainability and the central question of temporal endurance. Issues of ecological sustainability such as resource depletion are generally directly related to the temporal endurance of a system. Issues of economic sustainability such as inequality may directly impinge on the temporal durability of a system in some cases but may not in others. By contrast, issues of social sustainability such as injustice appear less likely to directly impinge on the question of functional durability over a given time frame. But, as we have highlighted throughout, this is not to say that a strictly temporal sustainability is inherently or necessarily limited to the ecological realm. To be certain, the integrity of ecological systems might be reasonably argued to represent the most

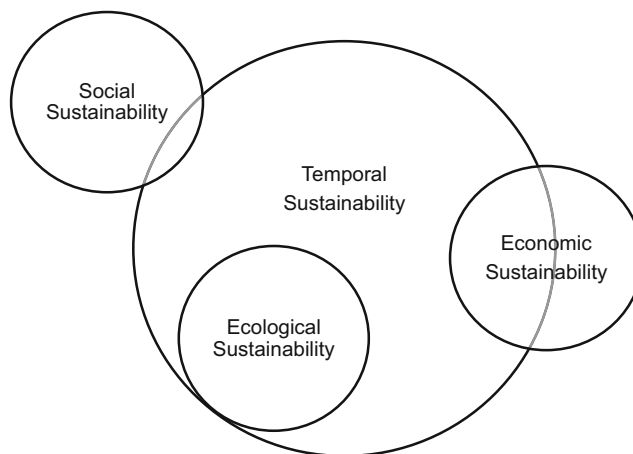


Fig. 1 Social, economic, and ecological dimensions of sustainability as they relate to temporal sustainability. *Distance from center* indicates the rough likelihood that issues related to each will bear directly on the temporal endurance of socioecological systems

⁸ The inverse of this may also be problematic (as social justice is indexed to environmental goals), though this seems less pronounced.

fundamental criterion for ensuring human survival, which at a minimum is predicated on sufficient supplies of food, clean water and air, fuel resources, and a suitable temperature among other necessities. At the same time, a conception of sustainability focused squarely on empirical, rather than moral, questions of humanity's longevity might reasonably involve non-ecological issues, some of which we have touched upon above. Some political or economic systems clearly present greater hazards than others to humanity's survival, particularly given new technological risks that have emerged since the middle of the twentieth century. Further, while we have acknowledged previously that temporal sustainability might plausibly be achieved using decidedly unjust approaches, achieving any version of justice on a lasting basis requires ensuring ecological sustainability as a necessary prior condition for a viable, stable, and just society. However, this achievement is likely to be hampered by the complexity and ambiguity of sustainability defined more broadly.

We see no inherent need to force the good into the meaning of sustainability in order to value a justice and sustainability as goals. But, in attempting to cover more conceptual and philosophical ground, sustainability as a political project has ceded practical ground at a historical moment when it can ill-afford to do so. Scholars and practitioners have articulated a vision of sustainability largely at odds with the colloquial usage of the term, and we fear that it has produced a sense that concern with even simple, ecological sustainability is the province of liberal elites. In other words, citizens who might otherwise have been at least open to concern with a narrow version of sustainability may ultimately be alienated by non-substantive visions of sustainability that have been welded unnecessarily to subjective, progressive values. While it is beyond the scope of our immediate purposes to offer detailed prescriptions here, there are ways to achieve a sustainability that is just, but every one of them requires first mobilizing popular support. We fear that wedging social justice and culture into the conceptualization of sustainability may be counterproductive for achieving necessary ecological outcomes.

The humanities help provide context for understanding sustainability issues, but sustainability as a field or endeavor will likely continue to founder as long as ethics and culture are made to be intrinsic parts of the concept. Among other drawbacks, pursuing this “unbound” sustainability comes at the opportunity cost of actual research about how far in excess of ecological limits our systems are, and how best to address such issues. Urgency with respect to mounting ecological issues would seem to preclude this sort of open-ended debate. To draw a parallel, we can debate about justice indefinitely (as we should), but when someone attacks an innocent person, we suspend the debate because we know something else needs to be done to address the situation immediately.

Maintaining ecological support systems is, at the most basic level, good for all humans (though not necessarily to the

same degree in the short term), and so long as we achieve that limited but standard, vernacular type of sustainability, justice can be pursued and the merits of cultural forms can be debated. Everyone should not be free to determine for themselves what is or is not sustainable. If this is the case, it will be all the more difficult to coordinate efforts toward the goals that people are more prone to agree upon. Imbuing an ecology-centered sustainability with the types of values described above yields a lack of coordinated effort by virtue of those values' inherently high degree of subjectivity.⁹ Given an already divided populace with respect to acceptance of and trust in science (see Gauchat 2012; McCright et al. 2013), this approach makes a problematic situation worse.

To call something unsustainable must mean something other than a conferral of disapproval. Otherwise, it is a meaningless term in a scientific sense and eternally contestable. Sustainability can form the basis for whether or not something is just or desirable, but ultimately whether X is a proper objective that a community should value—whether X is just, desirable, etc.—presents questions largely beyond the scope of a viable and useful conception of sustainability. Whether certain activities are, in isolation or collectively, unsustainable will contribute to judgments of their value, and sustainability provides but one relevant variable for consideration. The reverse is not true, however. Sustainability may reasonably impinge upon the degree to which different individuals evaluate the subjective desirability of a given outcome, but the subjective desirability of a given outcome is not a reasonable criterion for a useful or efficacious conception of sustainability.

Clearly, because something is sustainable does not mean it is necessarily just. But, it is sometimes assumed that justice forms a precondition for sustainability. As we have attempted to highlight throughout, we are open to the possibility that justice and particular cultural forms are essential for the existence of temporally sustainable systems, but this has not been empirically demonstrated to date, nor has it been theoretically developed in a coherent way. More work is necessary if this broad conceptualization of sustainability is to be empirically defensible and perhaps more politically viable. On one hand, we embrace many of the goals that normative definitions of sustainability subsume and agree that continued discussion of the term's meaning is worthwhile. On the other hand, we worry that normative definitions of sustainability tend to obfuscate rather than enlighten and, by extension, that they tend to hinder rather than advance even their own normative goals,

⁹ We are certainly not asserting science to be a value-free, completely objective field, nor the humanities to be completely subjective. However, we adopt a realist stance in this paper and maintain that science, as an empirical endeavor, is at least possessed of a greater capacity for reliability and validity by virtue of its correspondence with the biophysical world and potential for falsification. The world is apt to intrude in such a way as to suggest something about the veracity of our functional claims; it is perhaps less likely to do so with respect to our normative claims.

putting aside the more fundamental functional goals that we advocate above.

Without demonstrating more convincingly than has been done to date that normative concerns are necessary preconditions for our survival as a species, social justice in the context of ecological sustainability could perhaps be achieved much more effectively by calling for a “just sustainability” as a growing number of scholars recently have (Agyeman 2008). By simply adding four characters, the just sustainability paradigm provides what we see as a necessary and useful distinction between sustainability and justice (e.g., Sherriff 2009). While the distinction between justice and ecological integrity has not always been perfectly clear in this literature (e.g., Agyeman and Evans 2004), it nonetheless represents a careful and potentially useful combination of the two ideas. However, if it is indeed time to move past sustainability altogether as Benson and Craig (2014) suggest, then perhaps they are correct that a resilience framework may be a more productive logic for ecological governance. Given our concerns, their observation that resilience thinking requires a more transparent consideration of values alongside science in decision-making indicates reason for guarded optimism. Yet, it seems to us that sustainability and resilience might instead serve as complimentary concepts moving into the future. A renewed focus on temporality within a sustainability framework might serve as a vehicle used to pursue ecological goals upon which all others are contingent, while a resilience framework could be used to pursue those goals related to increasing adaptive capacity, which might be realized as persistability, adaptability, or transformability (Keck and Sakdapolrak 2013). It seems that the overlap between resilience and social sustainability is quite large (see Magis 2010), and the case for justice, equity, and the arts as key components of *resilient* socioecological systems seems on its face quite strong. Indeed, it may be the case that a system needs to be resilient in order to be sustainable in the truest sense of the word.

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