Critical sustainability studies: A holistic and visionary conception of socio-ecological conscientization

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Abstract: Sustainability has the potential to provide a holistic framework that can bridge the gap that is often found between socio-economic justice and environmental discourses. However, sustainability and sustainability education have typically accepted the prevailing socio-economic and cultural paradigm. It is my aim in this paper to demonstrate that a truly holistic and visionary sustainability (education) framework ought to demand radical and critical theories and solutions-based approaches to politicize and interrogate the premises, assumptions, and biases linked to the dominant notion of sustainability. If we are to envision and construe actual sustainable futures, we must first understand what brought us here, where the roots of the problems lie, and how the sustainability discourse and framework tackle—or fail to tackle—them. To do this is to politicize sustainability, to build a critical perspective of and about sustainability. It is an act of conscientização (or conscientization), to borrow Paulo Freire's seminal term, of cultivating critical consciousness and conscience. In lieu of the standard articulation of politics as centralized state administration, 'critical sustainability studies' is based on a framing that gives prominence to a more organic, decentralized engagement of conscientious subjects in the creation of just, regenerative eco-social relations. It illuminates the ideological and material links between society, culture, and ecology by devoting particular attention to how knowledge and discourse around and across those realms are generated and articulated. I believe that future scholarship and activism in sustainability and sustainability-related fields would benefit immensely from dialoguing with this framework.

Keywords: critical consciousness, colonialism, futures thinking, visionary education, culture and ecology

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The assumption that what currently exists must necessarily exist is the acid that corrodes all visionary thinking.

- Murray Bookchin, *The Meaning of Confederalism*, 1990

Introduction: Why Sustainability (and Sustainability Education)?

Despite conflicting opinions over what the terms 'sustainability' and its variant 'sustainable development' actually mean, the framework of sustainability has gained a lot of traction in the last two decades. Its Western origins can be traced back to the writings of Western philosophers and seminal environmentalists like John Locke and Aldo Leopold (Spoon, 2013). Redclift (2005) asserts that sustainability as an idea was first used during the 'limits to growth' debates in the 1970s and the 1972 UN Stockholm Conference. Perhaps the most commonly quoted definition of sustainable development is that of the World Commission on Environment and Development (WCED) who states that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43).

Sustainability has the potential to provide a holistic framework that can bridge the gap that is often found between socio-economic justice and environmental discourses. After all, recent scholarship indicates that the issue of environmental quality is inevitably linked to that of human equity (Morello-Frosch, 1997; Torras & Boyce, 1998; see Agyeman, Bullard, & Evans, 2002), and thus they need to be thought about together. I hold that an actual sustainable society is one where wider matters of social and economic needs are intrinsically connected to the dynamic limits set by supporting ecosystems and environments.

Sustainability education has emerged as an effort to acknowledge and reinforce these interrelationships and to reorient and transform education along the lines of social and ecological well-being (Sterling, 2001). By being rooted in whole systems thinking, i.e. "the ability to collectively analyze complex systems across different domains (society, environment, and economy) and across different scales (local to global)" (Wiek, Withycombe, & Redman, 2011, p. 207), sustainability education strives to illuminate the complexities associated with the broad, problem-oriented, solution-driven nature of sustainability (Warren, Archambault, & Foley, 2014). If we are to devise cultural systems that are truly regenerative, this "novel" brand of education urges the teaching of the fundamental facts of life by stewarding learning communities that comprehend the adaptive qualities of ecological patterns and principles (Stone, 2012). Sustainability education highlights the centrality of 'place' as a unit of inquiry to devise reciprocal—and thus sustainable—relationships where one nourishes and is nourished by their surrounding social and ecological milieus (Williams & Brown, 2012).

Additionally, sustainability and, as a consequence, sustainability education are future-oriented and therefore demand 'futures thinking': the ability to assess and formulate nuanced pictures of the future vis-à-vis sustainability predicaments and sustainability problem-solving schemes (Wiek, et al., 2011). In a nutshell, futures thinking suggests that we need to imagine the potential ramifications of past and current human activities by critically analyzing them today if we are to conceive of new, more sustainable futures (Warren et al., 2014). Future studies can therefore help people to pursue their "ontological vocation" as history makers (Freire, 1993, p. 66) and to (re)claim their agency as a means of creating the world in which they wish to live (Inayatullah, 2007).

However, sustainability and sustainability education have typically accepted the prevailing socio-economic and cultural paradigm despite their apparent holistic intent and

(theoretical) efforts to reconcile the three pillars of sustainability—equity, environment, and economy. Whether intentionally or not, they have promoted curative solutions instead of reflecting new, critical mindsets that can actually generate meaningful socio-cultural innovation by naming and discursively dismantling the systems and processes that are the root causes of the complex problems we face. And, as Albert Einstein once put it, "no problem can be solved from the same consciousness that created it."

It is my aim in this paper to demonstrate that a truly holistic and visionary sustainability (education) framework ought to demand radical (of, relating to, or proceeding from a root) and critical (of, relating to, or being a turning point) theories and solutions-based approaches to politicize and interrogate the premises, assumptions, and biases linked to the dominant notion of sustainability.

Troubling (Monolithic) Sustainability

In order to be able to unveil and critically analyze the propositions and suppositions of what I call 'the monolithic sustainability discourse,' it is fundamental to start with the etymology of the word 'sustainability' itself. The operationalization of the term can be problematic for it implies prior judgments about what is deemed important or necessary to sustain. While some of these judgements might resonate with an array of environmentalists who perceive that the health of the planet and the well-being of our descendants are being—or are already—compromised by certain human activities, various other perilous premises and assumptions are generally left unacknowledged as a result of the depoliticized character of the dominant discourse of sustainability. Lele and Norgaard (1996) have put forward three questions that can help us to uncover and think more critically about these presuppositions in and across various contexts and scales: (a) what is to be sustained, at what scale, and in what form?; (b) over what time period, with what level of certainty?; (c) through what social process(es), and with what trade-offs against other social goals? (p. 355).

By building on these critical questions and clarifications, we can better understand the nuances of how the destructive and thus unsustainable ethos of dehumanization and socio-ecological exploitation may inform and permeate normative notions and articulations of sustainability. Yet, this is only plausible if sustainability is politicized. To politicize is to engage the existing state of socio-political affairs, to problematize that which is taken for granted, to make explicit the power relations that are an innate part of everyday life and experience (Bailey & Gayle, 2003). In an attempt to comprehend why sustainability is typically depoliticized we ought to examine briefly its discursive history.

The term 'sustainable development' became a part of the policy discourse and almost every day language following the release of the Brundtland Commission's report on the global environment and development in 1987 (Redclift, 2005). While their definition included a very clear social directive, its human and political dimensions have been largely overlooked amongst references to sustainability, which, due to its environmental origins (Lele & Norgaard, 1996) and neoliberal focus on rights rather than needs (Redclift, 2005), have typically focused on bio-physical, ecological issues (Vallance, Perkins, & Dixon, 2011). Social sustainability, which has been conceptualized in response to the failure of the sustainability approach to engender substantial change (Vallance et al., 2011), is the least developed of the three realms and is frequently framed in relation to ecological and/or economic sustainability (Magis & Shinn, 2013). I assert that the reason for this is twofold: first and foremost, the sustainability agenda was conceived by international committees and NGO networks, think tanks, and governmental

structures (Agyeman et al., 2002), which makes it a top-down approach and, consequently, less likely to recognize and address themes such as structural poverty, equity, and justice (Colantonio, 2009); and second, because social sustainability is made subservient to economics and the environment, it fails to examine the socio-political circumstances and elements that are needed to sustain a community of people (Magis & Shinn, 2013).

Sustainability, since its inception as a Western construct, has been progressively viewed as a crucial driver in economic development and environmental management worldwide. Nevertheless, as delineated above, its almost universal focus on reconciling the growth model of economics and the environment has served to covertly depoliticize the dominant discourse and therefore render it uncontentious if not intrinsically benign. It is worth further exploring the dynamics of depoliticization for I believe they are at the radicle of the issues sustainability attempts to address in the first place.

Bailey and Gayle (2003) identify a series of acts that can be associated with the dynamics of depoliticization, three of which can be observed when examining the monolithic sustainability discourse: (a) eschewing political discourse; (b) removing from the discourse the recognition that social advantages are given to certain constituent groups; (c) not disclosing underlying viewpoints or values. These processes are enmeshed with intricate ideological instances that help to mask the systemic and/or structural nature of a social or cultural matter (Bailey & Gayle, 2003). Further, as Foucault (1984) has stated, "power is everywhere" (p. 93) and it is embodied and enacted in discourse and knowledge. Hence, possessing the analytical tools to name and unpack these discursive ideological formations and power dynamics ought to be a prerequisite to the development of more holistic and critically conscious understandings and applications of sustainability.

Politicizing Sustainability

If we are to envision and construe actual sustainable futures, we must first understand what brought us here, where the roots of the problems lie, and how the sustainability discourse and framework tackle—or fail to tackle—them. To do this is to politicize sustainability, to build a critical perspective *of* and *about* sustainability. It is an act of *concientização* (or conscientization), to borrow Paulo Freire's seminal term, of cultivating critical consciousness and conscience (Freire, 1993). It is a call for the necessity to highlight, problematize, and disrupt what I have termed 'the ethos of unsustainability' and its interrelated ideologies of dehumanization and exploitation. Ultimately, to embrace a stance that fails to scrutinize the sources of degradation and exploitation is to uphold the power relations that sustain oppressive structures (Freire, 1993; Perry, 2001). I assert that only by delving into the origins of the 'ethos of unsustainability' can we really devise sustainability paradigms that are capable of promoting significant socio-cultural transformation.

To comprehend the contours of the predicaments that loom on our horizon as well as their premises and logics, we must go back over 500 years in history to 1492, the year that marks the beginning of the current colonial era and the globalization of the European colonial imaginary (Tuck and Yang, 2012). It is important to note that my intention in doing so is not to provide a sweeping, all-encompassing description of this genealogy/historical process, but rather, to simply name, connect, and emphasize the ideological systems and patterns that have been conceptualized and reconceptualized so as to sustain the ethos of unsustainability and its exploitative power structures. After all, as Freire (1993) has indicated, "to name the world is to change it" (p. 88).

(World) Capitalism: A Technology of European Colonialism

According to the *Oxford English Dictionary* (*OED*)*,* the word 'colonialism' stems from the Roman word 'colonia,' which meant 'settlement' or 'farm.' The *OED* describes it as:

> … a body of people who settle in a new locality, forming a community subject to or connected with their parent state; the community so formed, consisting of the original settlers and their descendants and successors, as long as the connection with the parent state is kept up.

In *Colonialism/Postcolonialism*, Ania Loomba (2001) points out that this definition fails to link the word 'colonialism' to its ideologies of conquest and domination as it eschews any testimonial about those peoples who were already living in the places where the colonies were formalized. She offers another, more nuanced definition that hints to the processes of conquest and control of other peoples' land and resources (Loomba, 2001, p. 2):

> The process of 'forming a community' in the new land necessarily meant *unforming* or re-forming the communities that existed there already, and involved a wide range of practices including trade, plunder, negotiation, warfare, genocide, slavement and rebellions.

Loomba (2001) illuminates that while European colonialisms from the late fifteenth century onwards included a miscellany of patterns of domination and exploitation, it was a combination of these patterns that generated the economic disparity required for the maturation and expansion of European capitalism and industrial civilization; thus, capitalism demands the maintenance of colonial expansion in order to flourish. In spite of colonialism not being a monopoly of capitalism because it could be—and has been—utilized by so-called 'socialist' or 'communist' states as well (Dirlik, 2002), capitalism is a technology of colonialism that has been developed and re-structured over time as a means of advancing European colonial projects (Tuck and Yang, 2012). Colonialism was the instrument through which capitalism was able to reach its status as a global, master frame (Loomba, 2001).

A distinction between the three historical modes of colonialism might help to further elucidate the interrelationships between capitalism and colonialism.

Theories of coloniality as well as postcolonial theories typically acknowledge two brands of colonialism: *external colonialism*, which involves the appropriation of elements of Indigenous worlds in order to build the wealth and the power of the colonizers—the first world—, and *internal colonialism*, the bio- and geo-political management of people and land within the borders of a particular nation-state (Tuck and Yang, 2012). A third form, *settler colonialism*, is more suitable to describe the operationalization of colonialisms in which the colonizers arrive and make a new home on the land (Tuck and Yang, 2012). The settler objective of gaining control over land and resources by removing the local, Indigenous communities is an ongoing structure that relies on private property schemes and coercive systems of labor (Glenn, 2015).

In these processes of colonialism, land is conceived primarily if not exclusively as commodity and property, and human relationships to the land are only legitimized in terms of economic ownership (Tuck and Yang, 2012). These combined colonialist ideologies of commodification and private property are at the core of the various political economies of capitalism that are found in today's globalized world (O'Sullivan, 2005). By relying on the appropriation of land and commodities through the "elimination of the Native" (Wolfe, 2006, p. 387), European colonialisms wind up restructuring non-capitalist economies so as to fuel European capitalism (Loomba, 2001). The globalization of the world is thereby the pinnacle of a

process that started with the formation of the United States of America as the epitome of a Euro-centered, settler colonialist world power (Quijano, 2000).

Inspired by the European colonial imaginary, which transforms differences and diversity into a hierarchy of values (Mignolo, 2000) as well as by economic liberalism, which erases the production and labor contexts from the economy (Straume, 2011), the capitalist imaginary constitutes a broad depoliticization that disconnects its 'social imaginary significations' from the political sphere (Straume, 2011). Given that capitalism is imbued with European diffusionist constructs (Blaut, 1989), namely 'progress,' 'development,' and 'modernity,' the depoliticization of this now globalized imaginary is required not only to maintain the resilience of capitalism as a master frame (Straume, 2011), but also to camouflage its interconnectedness to European colonial systems.

Antonio Gramsci's (1971) study and articulation of the conceptualization and operation of ideologies proves fruitful in terms of understanding how the capitalist imaginary has been used to facilitate processes of globalization that benefit European colonialisms. He argued that ideologies are invaluable when manufacturing consent as they are the means through which certain ideas and meanings are not only transmitted, but held to be true (Gramsci, 1971). Hence, hegemony, the power garnered through a combination of ideologies and coercion, is attained by playing with people's common sense (Gramsci, 1971) and their lived system of meanings and values (Williams, 1976; see Loomba, 2001). Since subjectivity and ideology are key to the expansionist capitalist endeavor and its interrelated logics of commodification and domination (Gramsci, 1971), it becomes necessary to summon and dissect the colonial ideas and belief systems that have served and continue to serve as its conduits. This can in turn help us to interrogate the value systems and mental models that directly and/or indirectly inform the dominant notion of sustainability (education).

White Supremacist, Heteropatriarchal State Capitalism

As devised and practiced by Europeans and, later, by other Euro-centered powers such as the United States, colonial ideologies of race and racial structures smooth the way for capitalist production (Wolfe, 2006). The Eurocentric construct of race as "a system of discrimination, hierarchy and power" (Olson, 2004, xvii, p. 127-128) conveys colonial experience and infuses the most essential realms of world power and its hierarchies (Quijano, 2000). The state and its many institutions are particularly pivotal in sustaining these racialized ideologies that are obligatory for the development and continuance of capitalism (Loomba, 2001).

Slavery, as the foundation of notions of race and capitalist empire and one of the pillars of white supremacy, marks the concepts of 'progress' and 'development' as white (Painter, 2010) and renders black people as innately enslaveable, as nothing more than private property (Smith, 2010a). Within the context of the United States, the forms of slavery can and, indeed, have changed—from chattel slavery, to sharecropping, and more recently, to the prison industrial complex, which is still grounded in the premise that black bodies are an indefinite property of the state (Smith, 2010a)—yet, slavery as a logic of white supremacy has persisted (Smith, 2010a). The other two pillars of white supremacy are genocide, which expresses the need for Indigenous Peoples to always be disappearing, and orientalism, which builds on Edward Said's influential term to explain how certain peoples and/or nations are coded as inferior and, therefore, a constant threat to the security and longevity of imperial states (Smith, 2010a).

The pillars of white supremacy may vary according to historical and geographical contexts (Smith, 2010a). Nonetheless, the centering of whiteness is generally what defines a

colonial project. The formation of whiteness, or white identity, as a racialized class orientation stems from political efforts by capitalist elites and lawmakers to *divide and conquer* large masses of workers (Battalora, 2013). White identity is perhaps one of the most successful colonial and capitalist inventions since it "operates as a kind of property … with effects on social confidence and performance that can be empirically documented" (Alcoff, 2015, p. 23). It is a very dynamic category that can be enlarged to extend its privileges to others when white supremacist social and economic relations are jeopardized (Painter, 2010). It sustains itself, at least partially, by evading scrutiny and shifting the discursive focus to 'non-whites' (Silva, 2007). Whiteness is to be made invisible by remaining the norm, the standard, that which ought not to be questioned.

Capitalism therefore depends on and magnifies these racial hierarchies centered on whiteness. And, since race is imbricated and constructed simultaneously with gender, sexuality, ability, and other colonial categories—a conceptualization that serves to obscure white supremacy in state discourses and interventions (Kandaswamy, 2012)—, it is crucial to investigate the other ideologies that also shape class formation processes.

Heteropatriarchy, the combination of patriarchal and heterosexual control based on rigid and dichotomous gender identities—man and woman—and sexual orientations—heterosexual and homosexual—where one identity or orientation dominates the other, is another building block of colonialism. Patriarchy is employed to naturalize hierarchical relations within families and at a larger, societal level (Smith, 2010b). Similarly, heteronormativity paints heterosexual nuclear-domestic arrangements as normative (Arvin, Tuck, and Morrill, 2013) and is thus the bedrock of the colonial nation-state (Smith, 2010b). These social and cultural systems that configure heteropatriarchy are then apprehended as normal and natural whereas other arrangements or proclivities are demonized and perceived as repulsive and abnormal (Arvin et al., 2013). Heteropatriarchy is directly linked to colonial racial relations as it portrays white manhood as supreme and entitled to control over private property and to political sovereignty (Glenn, 2015). This indicates that the process of producing and managing gender frequently functions as a racial project that normalizes whiteness (Kandaswamy, 2012).

The laws and policies that were designed to institutionalize the formation of whiteness and white supremacy demonstrate that race, class, and gender are intertwined systems that uphold, constitute, and reconstitute each other (Battalora, 2013). The state and its ideological institutions are therefore major sites of racial struggle (Kandaswamy, 2012); they are responsible for devising and constantly revising the rationale that guides a white supremacist, heteropatriarchal settler colonialism grounded in the need to manufacture collective consent. These discourses are rooted in a pervasive state process that combines coercive state arbitration with societal consent by articulating the ideologies that link racial structure and representation as an effort to reorganize and distribute resources according to specific racial lines (Ferguson, 2012).

Despite increasing globalizing neoliberal urges toward deregulation and privatization, capitalism is still enabled and supported by the state. Its 'ideological apparatuses,' the state institutions and ideologies that enable and support the classist structure of capitalist societies (Althusser, 1989), is still fundamental to the expansion of capitalist enterprises; the nation-state is capitalism's atomic component. The neoliberal state has utilized innovations in methods of social discipline and control along with legal practices to facilitate the process of economic globalization (Gill, 1995). Yet, all these schemes that involve retention of power through dominance and manufactured consent are rooted in *divide and conquer* strategies that cause those in subservient positions in society to engage in conflicts with one another (Hagopian,

2015). The interlinked logics and ideologies of white supremacy and heteropatriarchy conceived by state capitalism serve to spur dissent between potential opponents and thereby further stratify socio-economic classes. This prevents them from building a unified basis that can present a tangible threat to the status quo (Hagopian, 2015). Colonial and neocolonial powers have repeatedly deployed this stratagem to not only increase their geographical reach, but also to normalize and standardize the economic growth model of capitalism.

Colonialism is hence not just an ancient, bygone incident. The ideologies and processes delineated above demonstrate that it has remained very much in effect within contemporary capitalist and neoliberal frameworks (Preston, 2013). It then becomes critical to investigate how the dominant sustainability discourse may or may not collude in these schemes so that we may conceive of holistic blueprints that beget positive socio-ecological transformation.

Sustainability and Colonialism: Contradiction or Conscious Ideological Maneuver?

By unearthing what I believe are the roots of the predicament that sustainability attempts to heal, namely the ethos of dehumanization and exploitation rooted in divide and conquer systems, it becomes easier to analyze how the colonial political economy of capitalism may conserve hegemonic ideologies that pervade social relations and knowledge generating processes.

Yet, these ideologies and knowledge schemes have been given minimal attention in sustainability (education) scholarship. Even though some academics have contributed to the generation of a more critical comprehension of the interrelationships between capitalism, environmental degradation, and socio-economic justice (see Cachelin, Rose, & Paisley, 2015; Martusewicz, Edmundson, & Lupinacci, 2011; Pellow & Brulle, 2005), this major blindspot in linking sustainability to the colonial imaginary and its legacies prompts the following questions: (a) why are critiques of colonialism and capitalism so infrequent in the sustainability literature?; (b) how does that impact the discourse of sustainability?

I assert that, in spite of calls for paradigm shifts, the dominant discourse of sustainability in the West embodies a transnational, globalized standard of economic growth. The promise that economic development can eradicate or at least alleviate poverty and hunger in a sustainable way reflects some of the same goals and values of the optimistic 'ecological modernization' concept and perspective, which suggest that the development and modernization of liberal capitalism result in improvements in ecological outcomes (Buttel, 2000). The neoliberal, capitalist overtones of sustainable development not only expose the contradiction inherent in the term, but they also serve to further commodify nature (Cock, 2011). This neoliberalization of nature, which has recently gained a lot of attention in the corporate world and academia under the lexicon of 'ecosystem services,' alienates people from their physical surroundings and therefore reinforces the society-nature divide. In short, the sustainability discourse has been appropriated by the capitalist master frame and has transformed most if not all social and ecological relations into financial ones. In lieu of addressing social and environmental justice issues, this form of "green" or "natural" capitalism is responsible for deepening both social and environmental inequalities (Cock, 2011).

Since sustainability (education) is (supposed to be) a praxis-oriented framework that symbiotically combines thought and action for transformative, liberatory ends, it ought to embrace this critique of colonial capitalism and the subsequent neoliberalization of the political economy if it is to oppose and resist hegemonic ideologies in its multiple and diverse manifestations. After all, whether intentionally or not, what matters in the end is that those

discourses of sustainability that do not take a stance against colonialism and capitalism only serve to preserve them and the status quo. An understanding of these interdependent systems allows for the development of critical sustainability dialogues and actions that can actually promote the paradigmatic shifts required to redress the socio-cultural problems that are at the heart of the environmental crises. Thus, sustainability can and should be reframed to suggest a process of personal, social, and cultural conscientization that is environmentally sound, i.e. one that follows ecological principles and patterns, instead of upholding the dehumanizing, exploitative, and paradoxical 'development as growth' standard of global capitalism.

The following section combines the analyses and critiques presented in the preceding (sub)sections into a single, cohesive, and holistic framework, and further elucidates the distinctions between monolithic sustainability and critical sustainabilities.

The Framework of Critical Sustainability Studies

> [T]he political cannot be restricted to a certain type of institution, or envisioned as constituting a specific sphere or level of society. It must be conceived as a dimension that is inherent to every human society and that determines our very ontological condition.
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> - Chantal Mouffe, *The Return of the Political,* 2005

'Critical sustainability studies,' while not exactly novel in the sense that it draws on principles, concepts, and positions that are foundational to other frameworks and fields—more specifically, critical Indigenous and ethnic studies, postcolonial theory, queer theory, feminist theory, crip theory, social ecology, political ecology, and cultural studies—, presents itself as an alternative to the sustainability theories and conceptualizations that have failed to engage a truly intersectional analysis of dominant sustainability and environmental discourses, policies, and practices. Its primary objective is to rearticulate sustainability as it has the potential to provide a more holistic conception of conscientization that can bridge the gap between social and economic justice and environmental sustainability.

The framework indicates a crucial double political intervention: to put sustainability and critical theory in conversation; to embed sustainability and ecology into critical theory and vice-versa. As I discussed in the previous section, sustainability has, for the most part, become a hegemonic and, therefore, highly problematic discourse that refuses to transform the complex ideologies and systems that undergird the ethos of unsustainability and the current socio-ecological crises. On the other hand, critical theory, which seeks to extend the consciousness of the human self as a social being within the context of dominant power structures and their knowledge management operations (Kincheloe, 2005), could benefit from incorporating ecological principles and the sustainability notion of 'place' into its analytical toolbox. After all, I am as interested in localizing critical knowledge—without disconnecting it from global matters and realities—as I am in putting forth more critical and radical views of sustainability. Hence, this framework brings together what I believe are some of the most robust and cutting edge theories and methodologies to facilitate the deconstruction of the questionable ideologies that guide Western epistemologies like (hegemonic) sustainability.

Critical sustainability studies encourages sustainability scholars and/or educators to move from a defined methodology of problem-solving to the more critical moment of calling something into question (Freire, 1993). By rooting it in conscientization, I propose an orientation to sustainability and sustainable development that politicizes and reveals it as an agenda,

discourse, and knowledge system that ought to be contested and rearticulated so that it can incorporate and critically engage with emancipatory understandings of power and power relations. Furthermore, by problematizing and closing the culture-nature divide, it can lay down the groundwork for the paradigmatic changes necessary to heal widespread colonialist alienation from the wider ecological community and to create visions of deep sustainabilities that can engender ecologically sound socio-cultural transformation.

I stress that the notion of *sustainabilities* is necessary if we have the intention of opposing and displacing the monolithic, top-down and now universalized sustainability agenda, which I refer to as 'big S Sustainability.' After all, much like science (Parry, 2006), *sustainability is not the property of any one culture or language.* There are different ways of seeing and knowing sustainability, so it is time to pluralize it in the literature and discourse. This simple act is an extraordinary intervention in itself because within the colonial imaginary "sustainability" means "Western sustainability." By centering "novel" understandings of sustainability that are concerned with the specificities of geo-political, cultural, and historical contexts and power relations, sustainability scholars and educators can create theories and visions of sustainability that can lead to the development of more just, place-based cultures and social ecologies.

Critical sustainability studies as I envision it is a consciousness-raising exercise that is particularly useful in educational settings. It indicates methodology as much as content. This praxis-oriented framework can help teachers and students alike to develop consciousness of freedom and to acknowledge authoritarian socio-cultural tendencies that have toxic environmental ramifications. The next section provides an overview of its tenets, the educational philosophy that underpins it, as well as the four preliminary methodological principles and examples of related pedagogical interventions that directly inform the framework and its liberatory, decolonizing ambitions.

Epistemological Position, Preliminary Methodological Principles, and Pedagogical Interventions for Conscientization

The epistemological, methodological, and pedagogical implications of critical sustainability studies are rooted in an ethical and political vision, one that is found in the vast majority of social ecology and political ecology projects: that "the domination of nature by man [*sic*] stems from the very real domination of human by human" (Bookchin, 2005, p. 1). In other words, we cannot overcome the ecological crisis unless we rid ourselves of the colonial ideologies of domination and hierarchy that permeate all forms of systemic and systematic exploitation and dehumanization. While much easier said than done, critical sustainability studies seeks to conceptualize this vision by building on the following tenets:

- That sustainability and sustainability education are *not neutral*, they either advance or regress justice and exploitation. Critical sustainability studies strives *to promote justice and ecological regeneration.*
- That *an analysis of power* is central to understanding and engendering positive socio-cultural change. Critical sustainability studies strives to be conscious of power relations and *to identify power inequalities and their implications.*
- That it is crucial to *foreground the sociocultural identities and experiences of those who have been (most) oppressed* – people of color, people with disabilities, queer and transgender people, the working class and the economically poor, undocumented immigrants, etc. Critical sustainability studies acknowledges that just, healthy cultures and societies can only be cultivated if we examine the circumstances that cause and maintain socio-economic marginalization.

- That *positive socio-cultural transformation comes from the bottom up*. Critical sustainability studies emphasizes and advocates a *collective and decentralized approach to sustainable change*.
- And, finally, that *the human community is inherently a part of rather than apart from the wider ecological world*. Critical sustainability studies affirms that this relational ethos serves as the epistemological foundation of novel, dynamic worlds where *healing and justice are at the front and center of our cultural and ecological identities*.

In addition to delineating critical sustainability studies as a praxis that is founded on the above tenets, the framework is guided by a critical constructivist epistemological position. Strongly influenced by Freirean pedagogies and the Frankfurt school of thought, critical constructivism endeavors to dissect the processes by which knowledge is socially constructed; in other words, what we know about the worlds we live in always demands a knower and that which is to be known, a contextual and dialectical process that informs what we conceive of as reality (Kincheloe, 2005). This epistemological position problematizes and extends constructivism by illuminating the need for both teachers and students to develop a critical awareness of self, their perspectives, and ways their consciousness have been shaped and/or reshaped by society (Watts, Jofili, & Bezerra, 1997). Critical constructivists attempt to comprehend the forces that construe consciousness and the ways of seeing and being of the subjects who inhabit it (Kincheloe, 1993, as cited in Watts et al., 1997). This political, counter-Cartesianism, and anti-objectivist philosophy (Kincheloe, 2005) is central to an emancipatory approach to sustainability and sustainability education, and is, therefore, at the root of the critical sustainability studies conception of holistic conscientization.

In line with the critical constructivist stance, I propose that this conception of socio-ecological conscientization ought to be rhizomed in four intertwined methodological principles and related pedagogical interventions that directly connect the indivisible processes of knowledge (co-)creation, teaching, and learning:

Table 1

The list of methodological principles and their accompanying pedagogical interventions that guide the critical sustainability studies framework of socio-ecological conscientization.

Methodological Principle	Accompanying Pedagogical Intervention
Intersectionality, positionality, and self-reflexivity	Place-based autoethnography
Multiplicity, pluralism, and accessibility	Multiliteracies as transformative sustainability pedagogy
Self-care and critical hope	Pedagogy of critical hope
Critical whole systems thinking and relationality	Critical pedagogy of place-based learning

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Intersectionality, positionality, and self-reflexivity: here I refer to the need to conceptualize sustainabilities that represent a more situated and reflexive knowledge of the issues at stake by looking at them through a position-based and intersectional lens. Self-reflexivity, which requires an ongoing dialogue with the whole self in regards to what we are experiencing, is not only an essential intercultural communication skill (Nagata, 2004), but it can also help us to explore the construction of subjectivity and self knowledge based on the acknowledgement of the intersections of our sociocultural and ecological identities. Kimberlé Crenshaw's (1991) feminist theory of intersectionality is therefore crucial in terms of facilitating a movement beyond self-reflection to the more uncomfortable level of self-implication (Jones, 2010). It is through these exercises of reflexive meaning-making that transformational learning and, thereby, cultural changes take place (Archer, 1996).

- Place-based autoethnography: this pedagogical intervention merges autoethnography as a narrative that problematizes the situatedness of self in social contexts (Spry, 2001) and place-based pedagogies in an effort to facilitate qualitative inquiries of self and subjectivity (including inner work) in relation to larger socio-cultural *as well as* ecological contexts. Self narrative storytelling can help members of learning communities to come to grips with the dynamic and intersecting qualities of their sociocultural, spiritual, and ecological identities while emphasizing a relational, systemic view of the place where the learning is happening.

Multiplicity, pluralism, and accessibility: context-based sustainabilities allows for multiple, non-hierarchical entry points and nurture the 'inextricable link' between biological and cultural diversity (Declaration of Belém, 1999; in Posey, 1999) while centering those who have been oppressed, repressed, and marginalized, including members of the non-human communities. Moreover, they emphasize the dialogic, mutually constituting character of eco-social relations, thereby disturbing essentialist articulations of power relations. A pluralistic resolution encourages the development of culturally and linguistically responsive approaches to critical sustainability curriculum rooted in both the 'multiliteracies' concept (see New London Group, 1996) and the Universal Design for Learning (UDL) framework (Rose, 2000, 2001). This "bricolage orientation" (Kincheloe, 2005, p. 8) to sustainability seeks to make it accessible by engaging a variety of bodies, abilities, and social, cultural, ecological, and cosmological positions.

- Multiliteracies as transformative sustainability pedagogy: this pedagogy focuses on the need to broaden the range of literacies that are generally foregrounded in classrooms. By not constructing images of (certain) students as unintelligent, incapable, or 'at risk' and by building on the prior knowledges and experiences of learning communities, transformative sustainability multiliteracies can employ a variety of tools to aid in students' (co-)construction of social, cultural, ecological, and spiritual knowledge. Ecological metaphors can be employed to shed light on the value of diverse perspectives and literacies in creating knowledges that are accessible and complementary.

Self-care and critical hope: self-care here refers to a transformative, dynamic, and political act rather than a conservative exercise of harm reduction—or, in the words of the feminist writer and activist Audre Lorde (1988), it consists of "self-preservation … an act of political warfare" rather than mere "self-indulgence" (p. 37). Self-care is hence an attitude that bolsters strength and builds resilience. Critical sustainability studies underlines the significance

of integrating mindfulness and *culturally appropriate* contemplative practices into the unsettling and open-ended work of holistic development and self-actualization. Mindfulness and contemplation are at the core of Michael Yellow Bird's (2013) *neurodecolonization* framework, which aims to erase the neural networks of colonialism. Self-care can also foster a sense of pragmatic, critical hope that involves the unrelenting pursuit of justice based on dialogue and action (Freire, 2014). A language of hope and possibility ought to be devised to support projects of socio-cultural change grounded in the notion that history is open and bound to collective transformation (Giroux, 1997).

- Pedagogy of critical hope: critical hope as a pedagogy can help sustainability educators to investigate the notion of 'critical emotional praxis' (Zembylas, 2014) along with their students. By providing emotional and spiritual aid to one another, members of learning communities can bring together political, ethical, and affective perspectives in the form of critique and action (Zembylas, 2014). And by supporting this work with mindfulness and contemplation, teachers can stimulate the sense of trust, community, and care that is necessary to prevent burnout and/or diminish the level of students' disillusionment with and resistance to the learning process. This pedagogy is particularly useful when engaging with stories that involve pain, despair, and overwhelming feelings of injustice.

Critical whole systems thinking and relationality: a truly holistic framework calls for critical analyses that facilitate a departure from the usual logics that guide the creation of fragmented inquiry and knowledge. Freire (1993) asserted that "when people lack a critical understanding of their reality, apprehending it in fragments which they do not perceive as interacting constituent elements of the whole, they cannot truly know that reality" (p. 104). The 'wicked' qualities of the quandaries that sustainability strives to address are not confined to any existing disciplinary field or epistemology and, thus, require an approach that transcends traditional disciplinary boundaries. Critical sustainability studies can be a 'supradiscipline' that strives to decompartmentalize knowledge by relying on 'critical whole systems thinking.' This conception of critical thinking combines Bronfenbrenner's (1977, 1979) *Ecological Systems Theory* and Watts et al.'s (1997) *Four Steps to Critical Thinking* as a model that moves beyond just raising individual awareness to promoting effective, collective change (see *Figure 1* below). This model relies on the development of relational imaginaries that can pinpoint, unsettle, and dismantle the colonial, human supremacist imaginary. An Indigenous-inspired relationality is integral here to nourish the understanding that the relationships between humans and the environment are not only interdependent, but co-constituted (Rìos, 2015).

- Critical pedagogy of place-based learning: community-based learning and 'critical pedagogy of place' (Gruenewald, 2003) intermix to link learning communities to their local communities and the land. Pedagogies of community-based learning facilitate students' connection to worlds outside of the classroom (Crump, 2002); yet, more frequently than not, these types of learning fail to take into account the interdependent and co-constitutive and nested nature of social, cultural, economic, and ecological systems. Gruenewald's (2003) 'critical pedagogy of place' can be integrated into community-based learning to generate a politicized and relational discourse of sustainability that strives to bring together people and land through ecological thinking. Critical whole systems thinking nurtures the agency demanded to intervene and reconstruct systems and power structures that are ecologically illiterate.
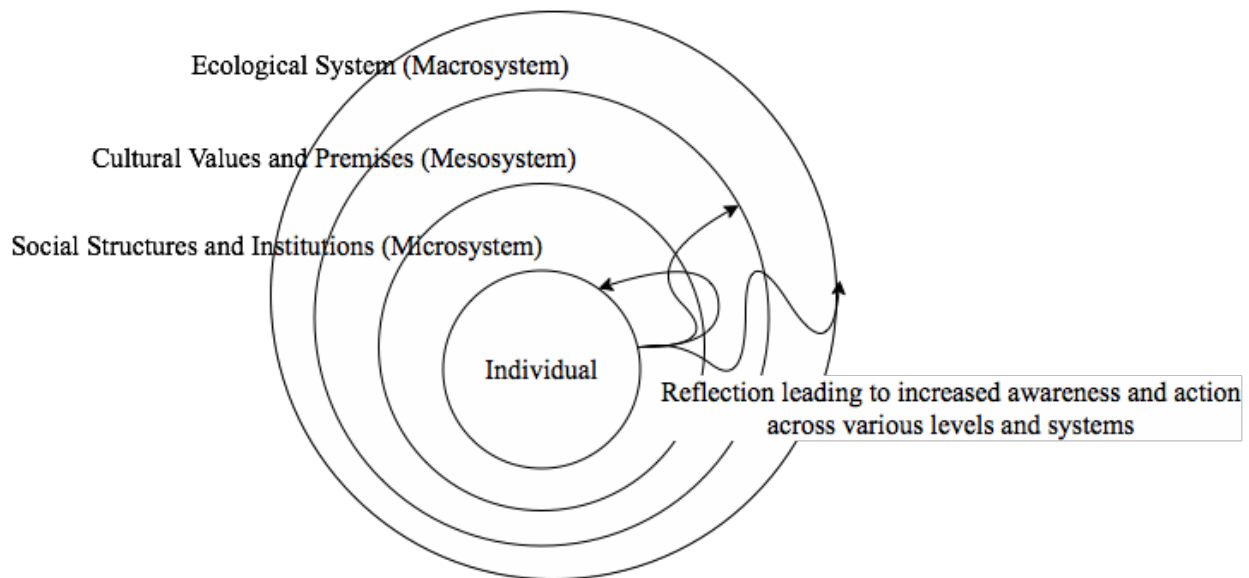
Figure 1: Critical whole systems thinking' embeds Watts et al.'s *Four Steps to Critical Thinking* into a slightly modified version of Bronfenbrenner's *Ecological Systems Theory* model. This person-process-context conception of critical thinking highlights the nested nature of ecological systems (and consciousness) while demonstrating the complexity of the conscientization act. The tortuous arrows show that continuous examination of self (in relation to the larger systems) through reflection can lead to increased socio-ecological awareness and a more comprehensive engagement with positive change in both theory and practice. In other words, by reconstructing meaning in complex, holistic ways, reflection mediates this non-linear praxis of conscientization.

The Power of the Critical Imagination: Sustainability as Visionary Fiction

In addition to grounding critical sustainability studies in the four principles outlined in the previous section, I hold that, if this framework is to prove useful and beneficial, it needs to incorporate and accentuate the power of the imagination. A critical and radical framing of the imagination and sustainability can help us move away from a language that relies solely on critique to one that is about personal and collective transformation and hope. By resignifying sustainability as a constant, dynamic envisioning exercise, we can unshackle the imagination and thereby expand the landscape of possibilities. A critical approach to futures thinking can tackle and transcend both the crises of imagination and the crises of power that hinder the development of new, just worlds (Haiven, 2014).

The writers and activists Walidah Imarisha and adrienne maree brown have coined the term 'visionary fiction' to describe science and speculative fiction that seek to conceive of and build freer worlds (Imarisha, 2015). So, fundamentally, whenever we envision sustainable futures, we are engaging in visionary fiction. This process demands conscientization—the dynamic move from individual unconscious consciousness to collective consciousness— that is founded on *prefigurative politics*, a political orientation that asserts that the end goals of projects of social transformation are shaped by the means they deploy (Leach, 2013). Sustainability as visionary fiction then ought to prefigure the kinds of futures it desires to produce. In turn, sustainability educators ought to be birthing critical and radical visionary stories that can decolonize the imagination, which "is the most dangerous and subversive form [of decolonization] there is: for it is where all other forms of decolonization are born" (Imarisha, 2015, p. 4).

Decolonization is hence the primary aim of the critical sustainability studies framework. The term decolonization is used here to refer to a means rather than a goal, to a discourse of imagination and critical hope that I believe is needed to achieve the more concrete, material goals of the unsettling project of decolonization, such as the reclamation of Indigenous land and life (Tuck and Yang, 2012). That said, I contend that critical sustainability as a visionary project is not free of inconsistency and contradiction; in fact, it should embrace such ambiguities and seek to remain contestable. There is no better way to do that than to recognize its limitations and ask questions that problematize it and move the discourse, along with its ideological and material ramifications, forward. The collective (re-)imagining of ambiguous futures is bound to experience epistemological disturbances and those disturbances ought to be seen as opportunities to strengthen the resilience and effectiveness of the framework.

In sum, as lifelong activist Dorothy Day once said, "just because something is impossible doesn't mean you shouldn't do it" (as cited in Palmer, 1999, p. 32). By liberating the mind through ongoing socio-ecological conscientization, we can develop an empowering sense of agency and responsibility for our choices and actions—and their complex consequences—in ways that spark both personal and collective transformation. Critical sustainability studies stresses that what was not possible becomes possible through our inventing it.

Toward Critical Visions and Applications of Sustainability: Future Dialogues & Directions

Critical sustainability studies is an effort to politicize sustainability and sustainability education. In lieu of the standard articulation of politics as centralized state administration, critical sustainability studies is based on a framing that gives prominence to a more organic, decentralized engagement of conscientious subjects in the creation of just, regenerative eco-social relations. It illuminates the ideological and material links between society, culture, and ecology by devoting particular attention to how knowledge and discourse around and across those realms are generated and articulated. I believe that future scholarship and activism in sustainability and sustainability-related fields would benefit immensely from dialoguing with this educational framework.

Yet, this is only the beginning. I hope that the critiques, ideas, and interventions presented in this piece will spark some further scrutiny of sustainability and engender more robust and holistic theories and visions of education. The anti-dogma and anti-rigidity quality of a critical sustainability praxis can inspire future engagement in areas that draw on and expand upon the following educational implications and recommendations:

- Teachers are cultural workers: educators are transformative intellectuals for they create new ideologies, meanings, and symbols (Giroux, 1997). Furthermore, by devising culturally sensitive and responsive curricula, teachers can work through students' cultural expressions toward individual and collective empowerment and ecological regeneration.
- Everyone is a theorist and an intellectual: all of us are theorists and intellectuals as we develop and communicate very particular views of how things are perceived by us. In an integrative, relational paradigm education becomes a dialogue about *Weltanschauung*, i.e., worldviews that construct meaning on the nature of being human (Kincheloe, 2005).
- Education as activism (*scholactivism*): education can—or perhaps should— become an impetus to action. Transformative educational praxes combine activism and scholarship to oppose oppression and envision new, sustainable

worlds. This requires seeing education as more than a technical, objective exercise; it demands that teachers and researchers take a political stance and make it explicit without imposing their position as the only truth (Kincheloe, 2005).

- Education is about healing and wholeness: education is inherently spiritual, so teachers need to transform it so as to heed and honor the needs of the spirit (Palmer, 2007). The art of teaching ought to facilitate the discovery of the gifts that come with nourishing an inner life. Education is about the dynamic act of interconnecting the outer work of learning to the inner work of self-realization (hooks, 2010).

All in all, despite being very realistic and prone to facing a considerable amount of discursive and institutional push back due to its dissenting nature, I believe that the critical sustainability studies framework can provide a more integrative and nuanced approach to studying and overcoming the crisis of unsustainability that plagues the planet each and every day of our lives. Critical times and conditions require critical measures and interventions, so it is my hope that novel sustainability imaginations and applications will emerge from this process of holistic conscientization.

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