Focus

MOBILISING DIFFERENT CONVERSATIONS ABOUT GLOBAL JUSTICE IN EDUCATION: TOWARD ALTERNATIVE FUTURES IN UNCERTAIN TIMES

Vanessa Andreotti, Sharon Stein, Ali Sutherland, Karen Pashby, Rene Suša, Sarah Amsler with the Gesturing Decolonial Futures Collective

Abstract: In this article we present four social cartographies with the intention to contribute to different conversations about global justice and education. The cartographies aim to invite curiosity, depth, reflexivity, openness, and the expansion of sensibilities as we engage with different analyses and possibilities for global change. We start with a review of HEADS UP, a social cartography that maps recurrent patterns of representation and engagement commonly found in narratives about poverty, wealth, and global change in North-South engagements and local engagements with diverse populations. We then describe the HOUSE, a social cartography that presents one way of diagnosing current crises and their multiple, overlapping dimensions. The third cartography, the TREE, makes a distinction between what is offered by different layers of analyses of social problems in terms of doing, knowing, and being. The last cartography, EarthCARE, is presented as a framework for global justice education, which emphasises the integration and entanglement of different dimensions of justice, including ecological, affective, relational, cognitive, and economic dimensions. The four social cartographies address different dimensions of the challenges of mobilising development and global education in socially complex and politically uncertain times.

Key words: Social Cartography; Global Challenges; Global Crises; Global Justice; Global Change; Global Capital; Cognitive Justice; Ecologies of Knowledge; North-South Relations; Reflexivity.

Each day, it seems, we awake to news about a different global crisis; stagnant wages and insecure employment, shrinking public services, market instability, growing numbers of refugees, famines, racial and gender violence, rising incidences of anxiety and depression, climate change disasters, and the re-emergent prospect of nuclear war. Indeed, evidence that we are reaching the limits of our current systems abound: the planet *cannot* sustain current levels of consumption and waste production; volatile financial markets *can* crash any day; and mistrust, resentment and social polarisation *can* erupt into open violence. The usual educational response to these challenges is that we need to develop and disseminate more knowledge and better policies, as well as more compelling arguments, in order to effectively convince more people to change their convictions, and, as a consequence, their behaviour. This perspective assumes a number of things. It assumes, for example, that the crux of these problems is a lack of knowledge and social consensus that can be addressed with more data, and more effective communication; that individuals are rational, self-interested, utility-maximising units; and that positive change happens through the implementation of policies produced within existing institutions. These assumptions are forged within a modern/colonial imaginary that presumes a single story of seamless progress, development and human evolution that divides humanity between those heading history, and those lagging behind.

We have been researching and experimenting with a different educational orientation that does not see the problems of the present primarily as rooted in a *methodological* challenge of better strategies (i.e. the call for more effective policies and communications), nor an *epistemological* challenge of knowing (i.e. the call for more data or information). Rather, we consider the problems to be rooted in an *ontological* challenge of being (i.e. the call to address how we exist in relation to each other and the planet). From this educational orientation, the problem lies in the universalisation of the modern/colonial imaginary restricting ecological, cognitive, affective, relational, and economic

possibilities. This orientation draws attention to how education within this imaginary has both invisibilised the violences that subsidise modernity, and masked modernity's inherent unsustainability. The modern/colonial approach to education has supported cognitive, affective, and relational economies that have left us unprepared and unwilling to address our complicity in systemic harm, or face the magnitude of the problems that we have ahead of us.

Therefore, we propose that the ways of knowing and being that have enabled the current system so far are not likely to provide guidance for new horizons of possibility. However, since we are deeply embedded in the current system, we cannot simply jump beyond existing horizons into something new without first digesting the lessons from the old and composting its waste. Given this, we will need to experiment with new kinds of education that can enable us to sit with the discomforts and complexities of death and (re)birth. This involves facing our complicities in harm and the dis-illusionment involved in interrupting our satisfaction with and investments in harmful economic and ecological processes. It also involves developing stamina for the long-haul of facing the difficulties, uncertainties, and paradoxes of cognitive, affective and relational 'decluttering' as we learn to 'hospice' a system in decline and assist with the birth of something new, undefined, and potentially (but not necessarily) wiser.

As one of such educational experiments, in this article we present four social cartographies that we use in different education research projects.

Social cartographies for global education

Often when one seeks to identify and interrupt recurrent social patterns, the expectation is that one will offer not only a critique, but also a prescription for subsequent action – that is, a clear path from a single understanding of 'here' to a predetermined 'there.' By offering social cartographies, we take a different approach that emphasises not just

alternative thinking, but alternative thinking about alternatives (Santos, 2007). Inspired by the work of Rolland Paulston (2000, 2009), we approach social cartographies as provisional depictions of different perspectives on shared problems of concern, addressing the theoretical orientations and philosophical assumptions of these perspectives, including where they derive from, what they enable, and what they foreclose (Andreotti, Stein, Pashby and Nicholson, 2016). This approach, which is more pedagogical than prescriptive, recognises that existing strategies for addressing global justice and social change are inadequate to the task of preparing us to face these uncertain times. Beyond the particular challenges of our conjuncture, the desire for guaranteed alternatives is rooted in a desire for intellectual certainty upon which modern/colonial ideas of ontological security are premised (Stein, Hunt, Suša, and Andreotti, 2017). It is precisely this set of linked desires that rationalise the reproduction of harmful relations, asserting a series of partitions and security measures rooted in fantasies of separation, autonomy, and control. Thus, rather than provide a model or checklist for transformation, or a clearly defined way out of the 'wicked problems' that characterise the present, these cartographies serve as open invitations to explore the limits, intersections, tensions, nuances, convergences, and divergences between and within different imaginaries.

From our experience, these cartographies can have a very interesting effect on our relationship with knowledge and the expectations we place upon knowledge production. When used educationally, they challenge learned modern/colonial desires for consensus, coherence, neutrality, and quick resolutions. In contexts where social imaginaries are marked by the search for certainty and control, they can facilitate deep learning processes and invite curiosity, reflexivity, openness, and the expansion of sensibilities as we engage with other possibilities. Engagements with social cartographies have resulted in the creation of new or revised vocabularies, deepened analyses, and dialogues that can breach cognitive and emotional lockdowns, change to

the terms of conversations, and open communities up to new horizons of possibility (Andreotti, Stein, Ahenakew and Hunt, 2015). By refraining from simply replacing one set of intellectual certainties with another, we suggest that these cartographies intervene at the layer of epistemological challenges, and gesture toward the limits of existing ontological possibilities; particularly for those accustomed to operating at the methodological layer, this can be a powerful interruption.

The four social cartographies that we offer address different dimensions of the challenges of mobilising development education in politically uncertain times. The first social cartography we present, HEADS UP, maps recurrent patterns of representation and engagement that are commonly found in narratives about poverty, wealth, and global change, particularly in North-South engagements and local engagements with diverse populations. The problems that this cartography articulates gestures towards the historical and structural foundations upon which current crises have emerged; these foundations are then further explored in the second cartography, the HOUSE, which seeks to illustrate the basis of current structures of existence, and thus serves as one way of diagnosing current crises and their multiple, overlapping dimensions. Having offered this diagnosis of current crises, and thus indicated the necessity for further analysis and interventions, the third cartography, the TREE, makes a distinction between what is offered by different layers of analyses of social problems in terms of doing, knowing, and being. The last cartography, EARTHCARE, is presented as a framework for global justice education, which emphasises the integration and entanglement of different dimensions of justice, including **e**cological, **a**ffective, **r**elational, **c**ognitive, and **e**conomic dimensions. This cartography was created by a collective of educational practitioners who come from diverse locations, both geographically and in relation to the challenges and crises they are confronting. Specifically, the cartography emerged in the context of a collaboration between the research project 'Social Innovation for Decolonial Futures' funded by the Social Sciences and Humanities

Research Council of Canada (see http://decolonialfutures.net), and the 'Ecoversities network' (see Teamey and Mendel, 2016).

There is increasing consensus that contemporary times are and will be, for the foreseeable future, characterised by political, economic, and ecological uncertainty and instability; yet there exists a considerable diversity of critiques about the origins of these challenges, and thus, propositions about how we might address them. Often in moments of crisis, people look for solutions that are available within our existing system. Within our diagnosis, however, the existing system is itself the root of many contemporary problems. Thus, with these four cartographies we have sought to indicate the limits of this system, without over-determining what an alternative system might look like. These cartographies invite people to think 'with' rather than 'about' them, and seek to prompt the possibility of dynamic movement without directing people toward a particular end, in fact, presuming that there are multiple possible points of arrival, and subsequent moves.

HEADS UP

While the social cartographies we present are meant to pluralise rather than foreclose possibilities for imagination and action, at the same time, we also attend to the risks that well-intended interventions might circularly reproduce the very patterns that they seek to transform. It is well-documented that educational initiatives that attempt to address global challenges without critically examining historical and systemic patterns of oppression and inequality tend to promote simplistic understandings of global problems and solutions, paternalistic North-South engagements, and ethnocentric views of justice and change (e.g., Andreotti, 2012, 2016; Pashby, 2011, 2013, 2015; Stein et al., 2016; Stein, 2017). Therefore, the need for critical thinking, engagements with multiple perspectives, and ethical forms of solidarity have been emphasised in recent policies and practices of global and development education. However, the challenges of engaging educationally with dominant practices in ways that enable learners to problematise and

move beyond the enduring single story of progress, development and human evolution is often under-estimated. It is for this reason that, in addition to cartographies that foster creative potentiality, we also need ones that enable us to learn from systemic mistakes and unlearn harmful patterns of thought, action, and existence, so that we might make different kinds of mistakes in the process of developing alternatives. Thus, for our first cartography, we present the HeadsUp educational tool.

The HeadsUp tool facilitates critical interventions in the contexts of efforts to address global justice and enact social change (Andreotti, 2012). This tool lists seven problematic patterns of representations and engagements commonly found in narratives about development, poverty, wealth, and global change, particularly in North-South engagements, as well as engagements with local structurally marginalised populations. The HeadsUp tool helps learners and practitioners identify:

- Hegemonic practices (reinforcing and justifying the status quo)
- Ethnocentric projections (presenting one view as universal and superior)
- Ahistorical thinking (forgetting the role of historical legacies and complicities in shaping current problems)
- Depoliticised orientations (disregarding the impacts of power inequalities and delegitimising dissent)
- Self-serving motivations (invested in self-congratulatory heroism)
- Un-complicated solutions (offering 'feel-good' quick fixes that do not address root causes of problems)
- Paternalistic investments (seeking a 'thank you' from those who have been 'helped')

There are questions for educational initiatives that go with each of the patterns identified:

	Whose idea of development/ education/the way forward?	Whose template for knowledge production?
Hegemony	What assumptions and imaginaries inform the ideal of development and education in this initiative?	Whose knowledge is perceived to have universal value? How come? How can this imbalance be addressed?
Ethnocentrism	What is being projected as ideal, normal, good, moral, natural or desirable? Where do these assumptions come from?	How is dissent addressed? How are dissenting groups framed and engaged with?
Ahistoricism	How is history, and its ongoing effects on social/political/economic relations, addressed (or not) in the formulation of problems and solutions?	How is the historical connection between dispensers and receivers of knowledge framed and addressed?
Depoliticisation	What analysis of power relations has been performed? Are power imbalances recognised, and if so, how are they either critiqued or rationalised? How are they addressed?	Do educators and students recognise themselves as culturally situated, ideologically motivated and potentially incapable of grasping important alternative views?
Self-congratulatory and **S**elf-serving attitude	How are marginalised peoples represented? How are those students who intervene represented? How is the relationship between these two groups represented?	Is the epistemological and ontological violence of certain individuals being deemed dispensers of education, rights and help acknowledged as part of the problem?

Un-complicated solutions	Has the urge to 'make a difference' weighted more in decisions than critical systemic thinking about origins and implications of 'solutions'?	Are simplistic analyses offered and answered in ways that do not invite people to engage with complexity or recognise complicity in systemic harm?
Paternalism	How are those at the receiving end of efforts to 'make a difference' expected to respond to the 'help' they receive?	Does this initiative promote the symmetry of less powerful groups and recognise these groups' legitimate right to disagree with the formulation of problems and solutions proposed?

The HeadsUp educational tool also highlights that trying to challenge all the problematic patterns identified at once is very difficult because they are tied to the 'common sense' of how we think about the world and each other (through the single story): how we are taught to perceive wealth, poverty, progress, development, education, and change. Thus, if these patterns are challenged all at once, the resulting narrative/intervention can become largely unintelligible. In addition, interrupting these patterns also tends to create paradoxes where a solution to a problem creates another problem. The message here is that the transformation of our relationships is a long process where we need to learn to travel together differently in a foggy road – with the stamina for the long-haul rather than a desire for quick fixes. The questions below illustrate some of the paradoxes we face in educational practice. How can we address:

> *Hegemony without creating new hegemonies through our own forms of resistance? Ethnocentrism without falling into absolute relativism and forms of essentialism and anti-essentialism that*

reify elitism? Ahistoricism without fixing a single perspective of history to simply reverse hierarchies and without being caught in a self-sustaining narrative of vilification and victimisation? Depoliticisation without high-jacking political agendas for self-serving ends and without engaging in self-empowering critical exercises of generalisation, homogenisation and dismissal of antagonistic positions? Self-congratulatory tendencies without crushing generosity and altruism? People's tendency to want simplistic solutions without producing paralysis and hopelessness? And, paternalism without closing opportunities for short-term redistribution?

We encourage readers to bring these questions with them as they explore the possibilities that are potentially enabled by the maps and moves of other cartographies.

The HOUSE

Responses to contemporary global crises vary according to different analyses of existing and ideal roles played by economic growth, consumption, technology, wealth, governance, and national borders. One way of mapping these debates is to establish a distinction between those who think that our current economic, social, and environmental systems are defensible (i.e. they are sustainable and ethical) and can be: 1) improved with more of the same, or 2) fixed with better policies; and those who believe the systems are not defensible (i.e. they are unsustainable and unethical), and suggest that either: 3) we need and can immediately create new systems; or 4) that genuinely new systems will only be possible once the old systems have become *im*possible. Each perspective presents different ideas for what global learning and development education should entail, for example, in alignment with the four possible analyses presented immediately above: 1) entrepreneurship and innovation for market expansion; 2) more effective citizen participation and expanded trust in representational democracy in order

to create better policies towards more inclusive, equitable, and greener economic growth; 3) degrowth, community autonomy, energy self-sufficiency, food sovereignty and solidarity economies; or, 4) palliative care for a dignified death for the old system and assistance with the gestation and birth of new, potentially wiser systems.

We have created a cartography that maps analyses 3 and 4, and that opens the possibility for attendant responses, which we describe through the metaphor of 'the house modernity built' (Stein et al., 2017). Through this cartography, we consider why the structure of this house appears increasingly shaky, and also why, despite this shakiness, many people continue to cling to its blueprints. In order to address how this relates to the modern/colonial system's basic elements, we consider each element in turn: a foundation of anthropocentric separability; two carrying walls of universalist, Enlightenment rationalism, and modern nation-states; and a roof of global capitalism.
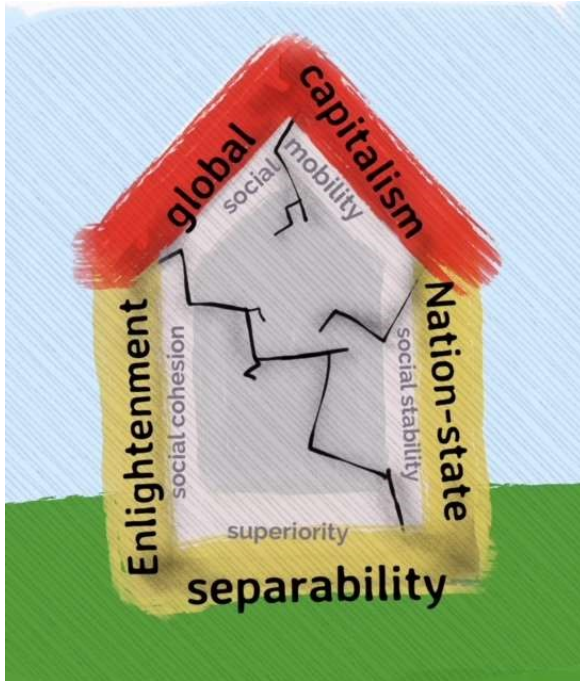
The House That Modernity Built

The house modernity built, first and foremost, institutes a foundational set of categories that are not just epistemological (related to knowing), but ontological (related to being), which enable certain possibilities for existence, and foreclose others.   These categories presume that living beings are autonomous, and that relationships between them are premised on naturally occurring differences in intrinsic value. In particular, separations are presumed between humans and the earth/ 'nature'/ other-than human-beings. These distinctions are further arranged in a hierarchical relationship premised on human domination/ownership, as well as separations between humans and

other humans. Separations occur through the creation of racial and gender categories and the institution of hierarchical relations premised on white and male supremacy, and other forms of normativity. These categories and their interrelations are instituted and reproduced through the production, transmission, and materialisation of Enlightenment knowledge (a load-bearing wall) within its attendant educational institutions, in which there is one universally relevant truth and moral code that qualifies and empowers people to describe, predict, and control the world and engineer the future. It is presumed that any flaws can be addressed through internal critique to ensure that human understanding progresses toward greater perfection, certainty, objectivity, and mastery. Meanwhile, this knowledge system enacts the erasure of other value systems and ways of knowing and the suppression of epistemic uncertainties and contradictions.

Politically, the house is made up of the nation-state (another load-bearing wall), which promises to maintain order to secure sovereignty by policing its boundaries and ensuring advantages for its citizens. The state guarantees property rights, and operationalises categories and hierarchies of humanity (e.g. citizen/non-citizen; deserving/undeserving) that are instituted through the house's epistemological and ontological categories (i.e. its foundation). Although some states grant their citizens some power over how they are governed, the law-instituting and law-maintaining violence of the state is rationalised by the need to ensure safety and protect property, including by deploying the police, military, and border police if deemed necessary. Increasingly it has become clearer that nation-states will tend to choose the protection of global capital over the well-being of (even their own) people; and/or it is assumed that deferring to the demands of global capital is the best or even the only way to ensure people's well-being. The current condition of this wall clearly indicates the limits of representational democracy, and the limits of possibilities for political

action that are premised on institutionalised processes, policies, and practices.

Economically, this house is premised on a regime of perpetual capital accumulation (the roof), which exploits human labour, expropriates lands and lives through processes of slavery and colonisation, and treats other-than-human beings as natural resources to be extracted, all for the creation of profit for a very few. These profits are then protected through the laws and policing of the wall of the nation-state. This economic system invites the investment of even those that it exploits, through its promises of social mobility, economic growth, and self-expression and realisation through consumption. However, today these promises appear increasingly shaky given slowing economic growth, under- and precarious employment, growing wealth inequality, and the increasing inaccessibility of affordable food, shelter, clean water, and even air. Further, more people are making connections between capitalism's imperative for endless economic growth, and the (dramatically unevenly distributed) realities of global climate change.

Viewed together, it has become increasingly difficult to deny that the foundations of the house show serious cracks, and leaks proliferate on its lower floors. At the same time, the house still offers one of the most stable forms of shelter, largely because of the instabilities that its operations have caused elsewhere. As noted at the beginning of this section, the increasingly shaky house has been interpreted in different ways. However, these interpretations generally either assert that the underlying structure of the house is sturdy and just needs renovations (whether major or minor), or that the house is ethically indefensible and unsustainable, and thus, it is necessary to build new forms of shelter, whether immediately or when the house starts to crumble on its own. How one understands the root causes and possible solutions to the house's current instability depends significantly on how one diagnoses the current problem, which we examine further using our cartography of the tree of different layers of analyses.

The TREE

According to Scott (2004), 'the way one defines an alternative depends on the way one has conceived the problem (6). How we conceive of a problem and what we propose in response shapes the critique we offer and our accompanying horizon of possibility. In this cartography we review three possible critical responses to contemporary systemic crises, in order to consider the assumptions, investments, and attachments that shape them, and to consider where each of them might lead. We describe each response as it relates to three different layers of possible analysis and intervention (methodological, epistemological, ontological), and how one would approach system transformation at each of the layers (soft, radical, or beyond reform of the system [see Andreotti et al., 2015]). We illustrate each layer further by considering how they relate to different approaches to education, international development, and social change, and by identifying some of the questions that one might ask when operating at each layer.

To help illustrate how each layer of analysis addresses different dimensions of a problem of concern, we use the metaphor of an olive tree. The leaves and flowers represent the methodological layer, the branches represent the epistemological layer, and the roots and trunk represent the ontological layer. Focusing on the leaves and flowers emphasises how to maximise growth of the existing system, to more efficiently produce and improve outputs – i.e. olives. Focusing on the branches would entail exploring different directions and angles of growth that could help the tree produce a broader range of better and more diverse outputs. The ontological is partly visible, through the trunk, and partly invisibilised, through the roots, but together they form the basis of the tree, upon which the branches and leaves are grounded. Focusing on the trunk and roots enables one to pay attention to the wider life cycle of the plant, its relation to the larger ecological metabolism within which it is embedded, as well as its inevitable death.
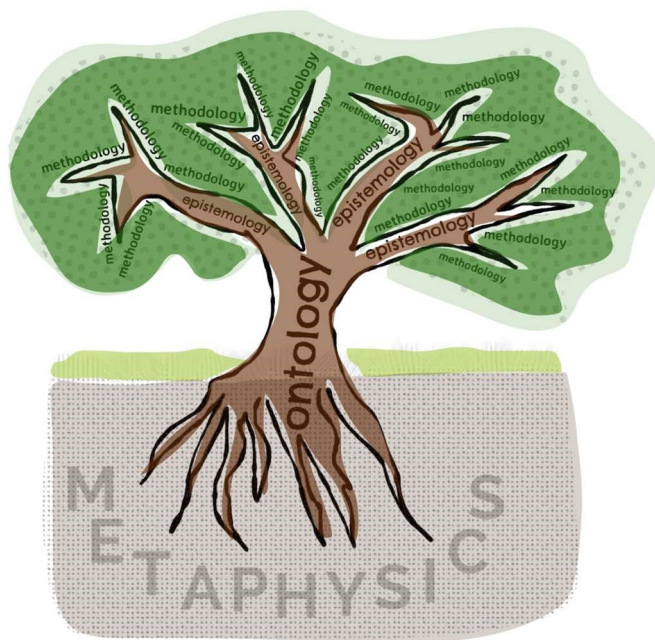
The Olive Tree

Methodological Critique (leaves and flowers)

Critiques that operate at the level of methodology conclude that the system is not operating as it should, that is, at its optimum performance level, and thus it needs to be adjusted in order to realign with its underlying principles and goals. Thus, this critique emphasises changing what and how we do something within our existing system to make it more effective on its own terms. The assumption is that any problems we face are attributable to a failure of the existing system to live up to its underlying promises. These include a lack of efficiency within capitalist markets, a lack of access to Enlightenment knowledge, and a lack of trust

in a nation-state's politicians. Conversations about how to move forward are ultimately limited because there is only one viable direction for progress. This critique is based on the assumption that the system is structurally sound, but there is room to improve what is already working well, thus following the imperative to engineer continuous progress. A deep investment in traditional intellectual economies and the presumed moral authority of traditional institutions inform both the critique offered from this position and its desire to produce policies and practices that will support predefined outcomes and goals.   In this way, approaches emerging from critiques at the methodological level seek to address contemporary problems using solutions internal to the system itself (asks the same questions, and gives the same answers).

Approaches to education that are driven by these kinds of investments in linear, seamless progress in order to ensure continuity rather than a more fundamental transformation, will likely take a soft reform approach to modern institutions and relationships. Meanwhile, approaches to international development from this critical space will be mainstream, premised on the presumed supremacy and benevolence of the most powerful and wealthy 'leaders' of the system (namely, Western nation-states), and the universal extension/adoption of their models for development elsewhere.

Approaches to social change that operate at this layer of critique are characterised by confidence that the generation of new ideas, products, and processes will solve persistent gaps in equity of the current system, so that what it offers is accessible to all. Some interventions in this realm emphasise the contributions of individual entrepreneurs whom have been deemed visionaries, or what Papi-Thornton (2016) describes as 'heropreneurs'; other interventions might foster social change through collective impact and a networked, systems approach rather than individual achievement.

Questions that might be asked at the methodological level are: *What is the problem? Who is affected? How can we fix it? How can I help? What should we do? How should we do it? What changes have people already tried to make, and what lessons can be learned from those efforts? What strategies are effective? What outcomes are expected? What challenges are faced? How does/will it work? How to improve effectiveness? What knowledge/expertise/data is missing? What policy is needed or not being implemented correctly? How does this compare to what happens in other contexts? What tools, incentives and training are needed for change makers to attain the understanding needed to make successful social change, and to appropriately address the problems they seek to solve? If the goal is progress, development, equity, and inclusion, how do we support change makers in a diversity of roles? How can social change be viewed as a distributed/interdependent process rather than a centralised/individualised effort?*

Epistemological Critique (branches)

Critiques articulated from the layer of epistemology agree with the layer of methodology that we need to do things differently, but add that we need to think about things differently as well. Epistemological critiques identify how the politics of knowledge are deeply linked to the naturalisation of historical, structural inequalities. These inequalities include the uneven distribution of power, wealth, labour, as well as hierarchies of merit, credibility and worth of cultures, individuals and life itself. Having identified more deeply-rooted flaws in the system, this approach tends to advocate for more drastic (radical reform) changes to existing political, economic, and educational systems. That is, we need to reconsider what and how we know – and how we might know differently. Such a critique identifies how our dominant frames of reference favour certain ways of knowing over others and thereby determine what is intelligible, desirable, and imaginable.

These dominant frames, in turn, shape: the kinds of questions we can ask and the answers that can be provided; the ways we adjudicate the

authority of knowledge claims; and the perceived validity of approaches to change. In recognising the limitations of these dominant frames, several imperatives become clear, including a need to attend to epistemological diversity and thus, to disrupt the illusion of epistemic certainty (and the universality that certainty implies). Thus, critiques of dominant ways of knowing and framing key issues at the layer of epistemology question the construction of what is perceived as natural, normal and common sense. Such critiques attend to how knowledge (rather than ignorance) can be used to rationalise socio-material practices that sacrifice the well-being of certain populations for the benefit of others. Epistemological layer critiques therefore help to identify the role of knowledge in historical and ongoing slavery, colonialism, imperialism, racism, capitalism, heteropatriarchy, and ableism, although it is rare to identify all these dimensions at the same time. Thus, it is deemed necessary to change the content of existing conversations and institutions by rethinking who is considered an 'expert', and ensuring access for more historically marginalised populations, thereby addressing questions of representation as well as redistribution.

When addressing the role of education, this layer of critique will emphasise the limits of a single story of progress, development, and human evolution. Educational interventions in line with this approach will focus on the inclusion of perspectives that have been excluded and encourage learners to make the unknown known in order to increase the range of options (same questions, different answers). Regarding international development, critique at this layer questions the hegemony and presumed universality of Western-led development models, in particular how they ignore and invalidate local knowledges and the possibilities they offer for developing differently. Thus, they imagine alternative forms of development, for instance, democratising participation in development so that local communities have greater power in decision making. Meanwhile, approaches to social change oriented by this layer of critique focus on understanding what is holding

the current system in place and who stands to benefit from its continuation, or to lose out if the problem is solved (Papi-Thornton, 2016). These approaches will also consider what historical, related, and interconnected issues are causing or impacted by the problem being addressed. Finally, they consider that often those who are encouraged to solve social problems may not have the lived experience and/or other adequate understanding of the complexity of the problems they seek to address, thus possibly unintentionally worsening the problems rather than solving them.

Questions that might be asked at the epistemological level are: *Whose bodies/voices are represented in what is perceived to be normal or natural? Who decides which direction forward is? In whose name? For whose benefit? How come (i.e. historical/systemic forces)? How are dissenting voices included (or not)? Whose terms of dialogue/inclusion are in operation? What collective traumas are present? Why? Who has been historically and systemically wounded? Whose vulnerabilities are visible/invisible? What notions of authority, merit, credibility, normality and entitlement are at work? What is being opposed and proposed as replacement? How am I complicit in harm? How am I reading and being read? How can I enact ethical solidarity? What information needs to be known in order to enact contextually and culturally appropriate solutions? What experiences and sensibilities would allow us to access this information? How do desires for mastery and individual heroism limit social change that might otherwise be oriented by concern for collective impact and relationships that value interdependency?*

Ontological Critique (trunk and roots)

At the ontological layer of critique, there is a notion that the problems plaguing the system are in fact of its own making, and further, that the system has always been subsidised by the violence of exploitation, ecocide, and genocide. Because solutions articulated from within the system itself will ultimately result in more of the same violence, the system is deemed to be beyond reform. The conclusion of this critique is

that *we cannot expect capitalism, the state, or Enlightenment humanism, to fix the problems that capitalism, the state, and Enlightenment humanism have created* – we therefore need to learn to exist otherwise and elsewhere*.* Thus, in the short term, contemporary problems might be mitigated in important ways by minor or major adjustments to its existing institutions. However, in the long term, the problems will not be eradicated until this system is dismantled, or collapses on its own, as we learn from its mistakes, mourn its decline, and create different possibilities in its place.

This perspective shares much of the major reform critiques, but goes beyond reconsidering what we do, and how and what we think, to also ask questions about who and what we (think) we are, the conditions for us to be and to understand being that way, the nature of reality (time, space, conscience, being), and how we could experience existence substantially differently. This critique seeks to explore the boundaries of what we perceive to be real, intelligible, possible and relevant and look for alternatives. The premise is that, if the architectures of existence that support the maintenance of the house are premised on continued violence, then we must reimagine our existence if we want the violence to stop.

When it comes to education, this layer of critique emphasises the pedagogical need to expand our existing sensibilities and constellations of knowledge, relationality, and affect. Such an expansion might then prepare us with the stamina and strength to face the difficulties of unlearning our investments in a dying system, and of learning the joys of travelling alongside one another (rather than in front or behind), in order to pluralise possibilities for co-existence in a fragile planet. With regard to international development, this critique tends to question the very idea of 'progress', and thus considers the need not just for alternative forms of development, but alternatives *to* development (Santos, 2007; Stein, Andreotti, and Suša, 2016). This analysis addresses the limits of the development model within the West itself, which has led us dangerously

close to the limit of our planetary capacity. Thus, within this analysis, mainstream development is identified as a theory of change that no longer offers a compelling nor ethical narrative vision for the future – if it ever did. Approaches to social change that undertake this analysis consider the possibility that the roots of the identified problems do not stem only or primarily from a lack of relevant, appropriate, or specific knowledge needed to fix it. Rather, the roots of these problems might (also) be related to the desires that shape the pursuit of predetermined solutions, mastery, and innocence that constrain other ways of relating and modes of existence. The critique shifts from an emphasis on how to understand problems in deeper and more nuanced ways, to a questioning of the desires for and limits of trying to fix the present for an imagined future on behalf of a supposedly universal humanity (Amsler and Facer, 2017; Osberg, 2018).

Questions that might be asked at the ontological level are: *What is the nature of reality, self, consciousness, time, space, change, life, and death in this context? What cognitive/ affective/ relational/ educational/ healing/ sensorial practices are possible from this worldview? How is the possibility of my understanding (knowing/sensing), or lack thereof, shaped and limited by my positionalities? What is this experience (of not knowing) teaching me about the possibility of possibilities that I could never have imagined before? What pedagogical frameworks might support a relationship to knowledge that is not constrained to description (becoming aware of the problems) and then prescription (seeking out appropriate actions to solve it), and instead towards holding and working with and through complexity and uncertainty? How might desires to 'fix' and 'solve' limit what global social change might be imagined as possible? What possibilities for global social change are enabled by a commitment not to 'fixing' but to unravelling what structures our 'being', and what possibilities lie beyond what we can know? What might a non-normative responsibility entail? How do we shift the action-oriented tendencies that currently*

dominate in global education and social change discourses away from fixed teleologies and towards engaging with the not-yet-possible?

Table: Usual Assemblages

	Methodological (leaves and flowers)	Epistemological (branches)	Ontological (trunk and roots)
Analysis of the system	Soft reform [system expansion]	Radical reform [system revamp]	Beyond reform [system change]
Theory of change	Maximise effectiveness and efficiency of existing economic, political, educational institutions through changes in public policy and practice	Diversify representation, access to existing economic, political, educational institutions through collective action	Disinvest from existence ordered by existing economic, political, educational institutions, consider the limits of representability
Horizon of hope/ possibility	Plan/engineer for the perpetual expansion and improvement of existing institutions, working toward a single/universal story of human development	Deepen our analyses and understanding so as to determine what changes might enable more people to be included into an expanded version of the existing system	Establish and maintain ethical, equitable relations premised on respect, reciprocity, solidarity to uphold the well-being of present and future generations
Terms of the conversation	Same questions, same answers	Same questions, different answers	Different questions, different answers

Approach to education	Ensure system continuity, continual progress, and the transmission of 'universal' truth/values	Learn from alternative ways of knowing in search of models and roadmaps that can lead toward a different future	Messy, collective process of learning/unlearning that may lead to viable but as-yet-undefined and unimaginable futures
Approach to development	Mainstream development	Alternative forms of development	Alternatives *to* development
Approach to social change	'Heropreneurship'	Collective impact through interconnected networks and systems thinking	Deep learning through collective experimentation, improvisation and reflexivity

We note that this cartography is not exhaustive, and only presents some of the most common assemblages. An important response not articulated in this cartography expresses a need to 'defend and protect the system by any means necessary'. It is essential to attend to this response as it projects the source of all systemic problems onto the most vulnerable populations who are already marginalised. Further, it justifies the intensification of securitisation at, within, and beyond the borders of the states in the name of protecting state sovereignty, private property, and conservative humanist values. The analysis emanating from this response often rationalises racist rhetoric and physical violence, intensified immigration restrictions, blatant discrimination, and expanded powers of the police, military, and intelligence agencies. While we do not wish to validate this response as a viable option, we nonetheless think it important to consider how and why its analysis appeals to some people, and to ask how elements of this approach might appear within any of the possibilities we do consider.

We also note that it is possible for a person or a collective to engage more than one of these assemblages, intervening at multiple layers and/or deploying contrasting elements of different critiques depending on the context. This more messy approach to knowledge contradicts the tendency that characterises our dominant approach to problem solving, in which the identification of a problem must be accompanied by a prescription for clearly articulated and coherent responses. Yet the dominant imperative can lead us to avoid problems that seemingly have no coherent solutions, to circularly try and solve problems created by our system with solutions articulated within that system, or to prescribe universal responses that are not appropriate for all contexts.

Part of the necessary work is therefore to learn to become comfortable with the unknown depth of the challenges that we face, and with the inevitable uncertainties involved in transformation. We must develop the stamina for addressing complex problems without a predefined end point, and for experimenting (responsibly) with different possibilities when opportunities arise. This, in turn, requires that we disinvest from our attachments to viewing ourselves as heroic, problem-solving protagonists and leaders who have the answers to the world's problems, and instead investing in the integrity of a collective, horizontal (messy) process of transformation. This is why the affective dimension of this work must accompany the cognitive one. We are still working on a version of the tree cartography that includes the affective dimension, but for now, we pose a series of questions to consider alongside the intellectual analyses, in particular for those working at the interface between the epistemological and ontological layers:

- What perceptions, projections, desires and expectations inform what you are doing/thinking and how do these things affect your relationships?
- What kinds of ignorance do you continue to embody and what social tensions are you failing to recognise?

- What is preventing you from being present and listening deeply without fear and without projections?
- What problems do your solutions reproduce or generate?
- What do you need to give up or let go of in order to go deeper?
- What truths are you not ready, willing, or able to speak or to hear?
- How can we distinguish between distractions and important stuff? How do we know when we are stuck? What strategies can get us 'un-stuck'?
- How can we respect the pace and readiness of people's learning while being accountable to those negatively affected by this learning and its pace?

In our final cartography, we seek to integrate not only the intellectual, or cognitive, dimension of global justice and social change, but also the affective, relational, ecological and economic dimensions, all of which are addressed with an eye to intergenerational implications. Together these make up the EarthCARE framework.

EARTHCARE

The EarthCARE global justice framework combines six complementary approaches to justice that encourage alternative approaches to engagement with alternatives (Santos, 2007). These approaches seek to move beyond the search for universal models and problem-solving approaches towards preparing people to work together with and through the complexities, uncertainties, paradoxes, and complicities that characterise efforts to address unprecedented global challenges collaboratively today. The framework proposes a vision of deep transformational learning processes that combine practical doing (together), building of trust (in one another), deepening analyses (of self, systems, and social and ecological complexity), and dismantling walls (between peoples, knowledges, and cultures). In this vision, intellectual engagements, the arts, ethics, cosmovisions, the environment, and

embodied practices are all understood as important conduits for learning. The framework invites learners to: explore the contributions, paradoxes, and limits of their current problem-posing and problem-solving paradigms; engage experientially with alternative practices that challenge the limits of their thinking and capabilities; and, contribute to the emergence of new paradigms of social change that open up not-yet-imaginable possibilities for co-existence in the future.

As envisaged by the EarthCARE network, an EarthCARE-informed curriculum for global justice engages participants in experiential learning that focuses on alternatives to the dominant modern/colonial global imaginary, including alternative economies, alternative ways of relating to ecology, Southern epistemologies, and initiatives that highlight the importance of teachings from grassroots resistance and soil-centred movements, including black, indigenous, landless, peasant, and Quilombola struggles. There is an emphasis on the knowledge of women and the reduction of gender, racial, and sexual violence and of vulnerabilities produced by intersectional systems of oppression. The EarthCARE framework offers guidance for developing learning experiences that can:

1. Challenge narrowly-imagined ideas of the public good;
2. Critically evaluate dominant practices and flows of knowledge production, and cultivate an appreciation for the gifts of multiple epistemic traditions, especially indigenous knowledge systems;
3. Resist paternalistic notions of progress and development;
4. Foster reflexivity through an awareness of the complexities, complicities, difficulties and paradoxes of doing this work; cultivate, develop and disseminate practices and skills that build various aspects of alternative presents and futures (e.g. around food, architecture, energy, media, waste, etc.); and,

5. Build a global alliance of people and communities with both the passion, wisdom, and humility to confront complex social crises by advancing integrative justice.

Conclusion

The approach to education outlined in this paper and illustrated through the various social cartographies aims to enable people to work with and through the complexities, uncertainties, paradoxes, and complicities that characterise efforts to address unprecedented global challenges. In particular, this approach seeks to create spaces for the flourishing of an 'ecology of knowledges' (Santos, 2007) in which there is symmetry between different and intersecting knowledges and ignorances (Teamey and Mandel, 2016; Santos, 2007). Such an ecology creates the conditions of possibility for people from diverse positions and histories to engage critically with the contributions and limitations of every knowledge system (including the most novel ones, which are only just in the process of formation) without reducing 'being' to 'knowing'. In this way, we might instead speak in the plural about ecologies of knowledges, as well as accompanying ecologies of ignorances, as every knowledge system has foreclosures and limitations.

This approach to education challenges mainstream educational approaches. It also offers alternatives to reactive dogmatism, romanticisation of alternatives, and/or absolute relativism that are presently creating intercultural inertia and other barriers to collaborative approaches to imagining and enacting global justice and social change. In this approach to education, learners would be supported to:

- Engage constructively and in critically-informed ways with the difficult issues and discomforts that emerge in processes of deep intercultural, intergenerational, and intersectional learning and change;

- Develop more complex, systemic, multi-layered, and multi-voiced questions, analyses, and practices that challenge and provide experimental alternatives to simplistic solutions to global injustices;
- Work with diverse and intergenerational others in developing coalitions and dissolving cognitive, affective, relational, economic, and ecological inequalities;
- Identify and transform problematic on-going patterns of local and global engagements that tend to be hegemonic, ethnocentric, depoliticised, ahistorical, paternalistic and offer uncomplicated solutions;
- Cultivate awareness of how we are personally implicated in the problems we are trying to address – that is, how we are both part of the problem and the solution in different ways;
- Understand historically marginalised people and communities as equally capable, intelligent, knowledgeable, and complex;
- Expand frames of reference, acknowledging the gifts, contradictions and limitations of different knowledge systems, moving beyond 'either or' towards 'both and more';
- Move reciprocally from theory to practice and from practice to theory, understanding the essential and dynamic link between them, and valuing both equally;
- Recognise systemic ongoing harm without paralysis, quick fixes, or pessimism, in order to re-ignite our visceral sense of connectedness with and responsibility towards each other and the planet; and
- Open our social and ecological imaginations to different forms of knowing, being, sensing, and relating, and to different futurities beyond a single story of teleological progress, development, and evolution.

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Vanessa Andreotti holds a Canada Research Chair at the University of British Columbia in Vancouver, Canada. Her research focuses on analyses of historical and systemic patterns of reproduction of knowledge and inequalities and how these mobilise global imaginaries that limit or enable different possibilities for (co)existence and global change.

Sharon Stein works as an assistant professor of higher education at Idaho State University. Her work examines the edges of what it is possible to imagine from within the mainstream (modern/ colonial) university, and experiments with what else might be possible if we disinvested from its institutional form.

Ali Sutherland is a writer, researcher and educator interested in knowledge translation at the intersection of many different fields: sustainable development, global citizenship education, food justice and social transformation. Her work has ranged from writing for international development organisations, to developing curriculum and pedagogy for community engaged learning and for the Centre for Sustainable Food Systems.

Karen Pashby works at Manchester Metropolitan University in the Department of Childhood, Youth and Education Studies and the Education and Social Research Institute. Her research is informed by post/de-colonial theories in Global Citizenship

Education, International Education, and Education for Sustainable Development.

Rene Suša is a post-doctoral fellow at the University of British Columbia, Canada. His work explores the hidden ideas, ideals and desires that drive modern global imaginaries. He is interested in exploring educational pathways that might help us re-orient some of these desires and create openings for different (unimaginable) futures.

Sarah Amsler is associate professor of education at the University of Nottingham and a member of the Social Science Centre, an educational cooperative in the UK, and the Ecoversities network. She is dedicated to understanding and creating epistemic, ontological, affective and pedagogical resources for liberation.

Gesturing Towards Decolonial Futures is a collective of researchers, artists, students, educators and eco-social innovators interested in artistic, pedagogic and cartographic experiments that may open up different ways of knowing and being in the world. The practice of gesturing towards decolonial futures involves constant learning and unlearning, detoxifying and decluttering, mourning, grieving and healing, composting and metabolising, so that other forms of co-existence may emerge. Their work can be found at http://decolonialfutures.net.