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To cite this article: Jonas Egmosse, Stefan Gaarsmand Jacobsen, Henrik Hauggaard-Nielsen & Lars Hulgård (2021): The regenerative turn: on the re-emergence of reciprocity embedded in living ecologies, *Globalizations*, DOI: [10.1080/14747731.2021.1911508](https://doi.org/10.1080/14747731.2021.1911508)

To link to this article: <https://doi.org/10.1080/14747731.2021.1911508>



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Published online: 26 Apr 2021.



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The regenerative turn: on the re-emergence of reciprocity embedded in living ecologies


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As the introduction to this collection suggests, many of the collected essays identify problems and challenges rooted in orthodoxies (see Gills & Morgan, 2020). Concomitantly, what is yet to be learned in the context of globalized extractivism, and teetering on the edge of the abyss of biodiversity loss and climate change, is that crisis cannot be met by adapting to its consequences whilst replicating its root causes. While discourses of transformational change reflect an awakening to this challenge, we still seem blind to the fact that what we are facing is a truly plural and interconnected crisis, named by its multiple symptoms: the climate – (IPCC, 2019); ecological – (IPBES, 2019); economic – (Piketty, 2013); and even – and perhaps most essentially – epistemological crisis (Santos, 2008).

These interconnected indicators cannot be separated from the results of historical and structural ecological impoverishment (Bonneuil & Fressoz, 2017; IPBES, 2019). At the core of the plural crisis, we see not only the destruction of human and ecological livelihoods but also the erosion (Negt, 1984) of our human and societal sense of being members of societies and embedded in ecologies. The crisis (or convergent crises) does not merely concern an outer environment (Sachs, 2010). Essentially, it is of relations between humans and their wider ecologies: in human, social and ecological relations constituting those living livelihoods we are inherently part of; the way we understand and conceptualize these relations; and in the way, we organize ourselves embedded in these. More than anything the plural crisis calls for cultural renewal in terms of understanding how we are related; attentiveness towards the ecologies in which we are embedded; and the very nature of human engagement.

It is in this particular context we draw attention towards what we currently see as a ‘regenerative turn’ re-emerging in the margins of industrialized farming and consumption, which might imply shifts from historical notions of mastery and extraction towards renewed attentiveness and human engagement. Fuelled by the technological development within mechanization, fertilizer and pesticide use, industrialized food production has grown bigger than ever. Concurrently a self-reinforcing decline in soil organic matter, through the interplay of human and natural processes (Rockström et al., 2009), has reduced natural capital at a speed never seen before (Steffen et al., 2018). This development, we argue, can be understood as somatic extractivism exploiting natural resources in close conjuncture with modern industrialism (Fraser & Jaeggi, 2018) and with

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increasing global inequality (Piketty, 2013). In contrast, and for centuries, traditional farmers have managed diverse self-sufficient and self-regulating locally adapted agriculture with ingenious practices that often result in both community food security and the conservation of agrobiodiversity (Altieri, 2004). It is such practices often associated with the so-called global South, which we now see as a regenerative turn in the so-called global North. This is the case in the field of agriculture where practices of agroecology, permaculture and regenerative farming emerges (Ferguson & Lovell, 2014; Soto et al., 2020; Wezel et al., 2015). These pay greater attention to the inherent capacity of living ecologies to regenerate through diversity and reciprocity in human-nature relations. This renewal is the case in democratic urban and rural counter-movements challenging the way we inhabit the ecologies in which we are embedded (Fadaee, 2017; Martinez-Alier et al., 2016). It is the case in new cooperative forms of organization challenging existing value chains through solidarity economy and food sovereignty, with the transformative potential to reconnect, what has being disconnected: the relation between rural and urban, food production and consumption, through mutual and direct principles of organization (Gliessman et al., 2019).

Reconnection, however, equally implies altering practices and epistemological transformations. While Western science has provided the foundation for industrialized practices, Northern epistemology has equally served as the knowledge part of global colonization (Santos, 2008). Distinctions regarding what counts as valid knowledge follow the hegemony of deeming certain practices, types of production and entire cultures irrelevant, including how they interact with soil and land. Since the seventeenth century scientific revolution, major sciences have built on dualistic Cartesian division between humans and nature. Fuelled by the aspiration of freeing humans from nature, the division has encouraged ideas of complete mastery over nature. With the increasing specialization of scientific disciplines, the ambition of steering, controlling and manipulating physical processes has intensified despite intermittent reactions (Bonneuil & Fressoz, 2017). The Cartesian *cogito ergo sum* remains emblematic for the extractivist position in the sense that the monopoly of thought provides human beings with the right and the means to control and master. Early critical theory's critique of the dialectics of enlightenment (Adorno & Horkheimer, 1944) establishes that the human aspiration of enlightenment through rational thinking inherently implies barbarous potential in the context of mastery of human, cultural and ecological relations. Monopolizing thought in enlightenment thinking implies the power to define who and what should count. For Locke the human ability to change nature through labour served to signify what should count as property and what should count as waste, implying that nature without alteration through human labour was wasteful (Wenzel, 2016). Hence, the foundation of mastery and extractivism is truly epistemological, neglecting that we are embedded in living ecologies, which humans have the capacity to destroy and to let live (Elhacham et al., 2020; IPBES, 2019). Thus, we stand at a crossroad and need to re-negotiate the way in which we live in the world. To engage in a process of re-negotiating, epistemological foundations may cause much anxiety among scholars, since many concepts, theories and even entire philosophy of sciences, which we have taken for granted, cannot be exempted from this process of re-negotiation. We need to re-address what has become absent and suppressed by hegemonic forms of 'development' and re-approach practices that may appear to be new, but are, in fact, drawing upon practices and knowledges that could re-emerge when interacting with the movement of counter-hegemonic globalization (Santos, 2008).

As stated by ecofeminist academics (Plumwood, 1993) we will argue that what has effectively become invisibilized is the basic regenerative capacity of the living, and the ways we are embedded in living ecologies through multiple entanglements. Through the combination of scientific reductionism and systemic thinking, mastery of nature was brought into modern environmentalism,

being able to monitor but struggling to safeguard the emergent capacities of the living to be sustained. Thus, modernist environmentalism has been left in a paradox. The ever-advancing strategies of monitoring, modelling and protecting Earth's environments always seem one step behind the continual and cumulative forces leading to ecological destruction. The epistemological challenge is firstly to renegotiate understandings of the inherent regenerative capacity of the living, and secondly to redefine our human relational engagement with the living in ways, which might enable living ecologies to sustain.

How can we understand the inherent capacity of the living to regenerate? Over the last decade, the notion of resilience has attracted increasing attention amongst scholars. This spans the political, social and environmental sciences and conceptualizes an adaptive capacity to resist outer pressure for everything from the atmosphere, organizations, to cities and agriculture as eco-systems (Folke, 2006). Not surprisingly, this 'resilience' concept has gained popularity in the context of the climate crisis, given its promise to withstand environmental disasters. For example, in the context of farming, shifting from sole cropping to crop-diversification, which counters the current commercial cultivars that narrow the genetic base, is a well-known strategy. It offers productive, diversified and resilient agroecological cropping systems less dependent on external inputs than current systems (Brooker et al., 2015). However, while the concept of resilience importantly draws attention to the inherent capacity to regenerate, its epistemological foundation in system thinking risks neglecting the ontological relatedness of embedded living ecologies. Where this is so, demands to master, cope and securitize are reproduced for everything from high-carbon urban lifestyles to unsustainable agriculture (Blythe et al., 2018; Dalby, 2013). What we can learn from resilience thinking is that an essential feature of the living is the inherent regenerative capacity to sustain. But we need to transcend the epistemological boundaries of systems thinking in order to acknowledge the ways in which we are not only detached from but also truly *embedded in* living ecologies. This requires relational epistemologies, which acknowledge the indefinite entanglements of the living.

Understanding everything as related is obviously not an easy task for evermore specialized scientific disciplines. These acquire analytical strength and political power by setting up self-evident ontological boundaries, which serve also to constitute themselves. In a broader historical perspective, therefore, it should be of great interest, how plural attempts are currently emerging to reinvent our very thinking, language and methods. This plurality searches beyond contemporary epistemologies for qualitatively different ways of understanding ourselves and our entanglements with the world.

Within academia, the search is not least the case in recent ecofeminist and ecological thinking. This thinking transcends traditional scientific disciplines across ecology and humanities, re-negotiating possible ways in which humans are interweaved in the 'more-than human' (Haraway, 2016). New flat ontologies, however, will not do the job if they overlook that everything is not only related, but also structured (Bonneuil & Fressoz, 2017). Humans can act and exert changes on nature, ecosystems and communities both in regenerative and extractivist ways (Hornborg, 2017; Malm, 2020). The challenge is not to find renewed strategies for mastery and extraction in a post-apocalyptic world. The task is to find ways in which we can actually practise living in ways that make other worlds possible for the living to sustain (Gibson-Graham et al., 2013; Roelvink et al., 2015). This task is not to be confused with the abstract language of securing eco-system services or a safe operating space for humanity (Rockström et al., 2009). Rather it implies not only finding new languages, but also enabling, reinventing and learning from real practices,

demonstrating that relations beyond mastery and extractivism *are possible in practice* and in very concrete ways.

This is where we want to draw attention to the regenerative turn currently taking place in the organization of agriculture and food sovereignty. This, in turn, implies new cropping practices that, rather than constituting themselves primarily by principles of industrialized production systems, become more attentive to the living soil, and to experimentation with agricultural, cooperative and economic structures beyond extractivism. Clearly, potential pitfalls for regenerative thinking exist, but so do links between new ways of thinking across initiatives in the global South and (the global South in) the global North. Much might still to be learned for instance from indigenous philosophy and practices such as *buen vivir*, living well in harmony between nature and community (Morales et al., 2019) and how such thinking and practice can guide and transform current practices from the inside across the world.

A guiding principle must be to work *with people* in transitions and with democratic openness towards other ways of thinking. In very concrete ways transitions from extractivism and mastery have to be meaningful to people in their lives - citizens, practitioners, policy makers - for concrete, political and societal change to happen (Altieri & Rosset, 1996; Toffolini et al., 2017). In this context, a return to the meaning in, of, and attentiveness to the living soil, can serve as guide facilitating transition to new ways of organizing human practice. While the regenerative turn is a movement of practice, research can play important roles in enabling infrastructures for exchange of marginalized experience and consolidation of emerging knowledges.

This challenge readdresses the question of the character of human engagement in living ecologies. As humans we are not only in the world, but always also in-relation with the world, hence our human freedom and responsibility. Such relationship, however, does not per se mean mastery. What we need, is to re-negotiate what reciprocity means. And ask: what human qualities characterize responsibility; carefulness; attentiveness? How can we translate such qualities across multiple practices, knowledges and contexts grasping entanglements of the living? Perhaps now is not the time for final answers, but rather to initiate and search for qualitatively new kinds of questions for the re-emergence of an embedded reciprocity in living ecologies.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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