

Ecologizing economic sociology: A tale of (dis)embedding?

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The destruction of existing modes of exchange and production in many places is a likely outlook for a world that is unable to deal adequately with its dependency on a “critical zone” of livability (Latour and Weibel 2020). In the Anthropocene, food and water security will probably be more difficult to achieve; social and political protection against loss through floods, heatwaves, and hurricanes will be more costly; and the provisioning of goods, services, and public health will become more demanding (Elliot 2021; Thomas, Williams, and Zalasiewicz 2020, 12). Given the rapidness with which the tipping points of the earth system seem to be reached, a considerable reinvention of economies appears to be imminent in the near future: changes in the calculation of risks, reassessments of values, changes in the transferability of goods and in the acceptance of collateral, upheaval in the circulation of matter, and, last but not least, rising costs of (re)production are to be expected. The question is not if economies and societies are ecologized, but how, at whose expense, and with what dynamics and effects. The current modes of ecologization under the heading of “green finance” give no adequate sense of the transitions required and underway. As has been pointed out, they are motivated by political cultures of regulation that favor market solutions, coexist with cultures of denial, deepen existing patterns of social exclusion, thrive on the inequality of political influence, and have paradoxical or insufficient effects (Bridge 2011; Chiapello 2020; Langley et al. 2021).

One might assume that economic sociology is specifically suited to analyzing the contentious and various articulations between ecologies and economies, however catastrophic or potentially benign, however unintended or planned. It is surprising to learn that economic sociology has been comparatively reluctant to make the ecological and material conditions of livability into a main topic of interest. Economic sociology has a dim presence in the lively debate on the environmental humanities or energy humanities to which social theory, political theory, anthropology, and geography contribute. Of course, there are always exceptions to the rule, but the relative sparseness of contributions to this topic is noteworthy (Gray and Barral 2021). Is there something in its own heritage that makes it more difficult for economic sociology to open up to the task at hand? What would the unique perspective that economic sociology can offer in the ongoing debates be? And what would it imply to ecologize this subdiscipline and to increase its strength for studying the economy of the Anthropocene?

As I show below in further detail, economic sociology currently fails the “Anthropocene test” due to a double intellectual burden that stems from its development as a subdiscipline in the 1980s. In its founding moment, new economic sociology accepted from neo-classical economics the *formal* definition of scarcity and a dematerialized account of the market as the central allocation mechanism. At the same time, it defined its own program as making economics “more real” by embedding it in social structure. Economic sociology grew its sociological expertise for rethinking econom-

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ics, thus carrying with it sociology’s own forgetfulness of material and ecological relations (Charbonnier 2021). In other words, new economic sociology sits at the intersection of two dematerialized accounts of order: economic and social.

Given the sheer weight and extent of such intellectual history, there is no easy and unequivocal solution. New economic sociology always has been a loosely conjoined field of many different perspectives; hence, there will be many ways of addressing the task of ecologization. In this essay, I want to plot one possible way of ecologizing economic sociology by making three points. First, economic sociology should further

materialize/ecologize the processes of “disembedding” that it has focused on in recent decades. Second, I argue that such materialization/ecologization is greatly enhanced by a methodological stance that makes space and land a more prominent concern. In recent years, a focus on temporality has afforded the most innovative account of economic action and logic; but that account has overlooked how many different temporalities of diverse species and matter are involved when economic futures are imagined, traded, and claimed. Third, economic sociology should no longer understand the act of “embedding in social structure” as making economics “more real.” Quite the contrary, the social-cum-economic order must be addressed in terms of the ignorance, denials, and immunities it affords in respect of ecological relationalities. Such shielding from exposure is radically unequally distributed, while ignorance of the expected upheavals still pays off for selected groups within and across species.

In the following sections, I will first look more closely at how and why economic sociology became ill-disposed to addressing ecological relations, before exploring which strategies of ecologization are already at play and might further be pursued along the three lines indicated above.

Ecological limits of accounting for (dis)embeddedness

New economic sociology has described its own program as a genuinely sociological analysis of “economic core phenomena” (Granovetter 1990, 95). It describes as its “important achievements” to “have opened up the sociological studies of markets” (Swedberg 1987, 105). The key concept for achieving such sociological analysis consists in “embedding” economic action in social structure. Instead of dealing with “fictitious actors” and “hypothetical interactions,” sociologists look at “concrete ongoing systems of social relations” (Granovetter 1992, 58) and “real actors” (Swedberg 1987, 105). While economics conceives of markets that are “virtually nonexistent in economic life” (Granovetter 1992, 65), sociologists claim to look at the reality of economic life. Economic sociology prized itself on overcoming the abstractions of neoclassical economics by bringing the conception of the market “close to reality” (Swedberg 1987, 105).

While seeking to overcome and oppose the fallacies of neoclassical economics, new economic sociology consciously and deliberately retained two crucial tenets of neoclassical economics. First, it understood the market as a central allocation mechanism

for scarce means. Neoclassical economics, despite all sociological critique, was praised for having “conceived of the market as the central mechanism of allocation in the economy. This idea no doubt reflected the change that had gradually come about in the West: the economy was increasingly centered around markets” (Swedberg 1994, 259). By taking the market as an allocation system and the economic actor as a central building block for defining the core economic phenomena, new economic sociology “reflects the success of one discipline, and of one doctrine within that discipline, neoclassical economics, in asserting the primacy of the market as the most important economic institution” (Friedland and Robertson 1990, 3). Second, by adopting the neoclassical account of markets as a formal allocation mechanism, new economic sociology intently did away with a more material account of economic order: “Definitions of the economy that focus on the production of material objects...are considered unsuitable today. Economic theory and economic sociology also agree in a general way that economic action is a type of behaviour that has to do with choosing among scarce means that have alternative uses” (Swedberg and Granovetter 1992, 6). The core economic phenomenon was thus deliberately defined in opposition to a material understanding of economic processes, which was closely associated with the substantive traditions of anthropology.

New economic sociology intently and explicitly distanced itself thereby from a material or substantive account of economies that had still informed Karl Polanyi’s understanding of the conceptual pairing of embedding and disembedding. For Polanyi, economic order was defined as the organization of livelihood. Labor, land, and money were seen as the key material, symbolic, and social elements of such organization. For Polanyi, any attempt at disembedding land, labor, and money *as if* these were commodities would necessarily imply their “demolition” (Polanyi 1957, 73). New economic sociology shunned these substantivist and normative claims linked to the pairing of (dis)embedding. Instead, all economies were seen to be embedded; that is, all markets are social structures.

Doing away with these substantivist and normative connotations of the notions *embedding* and *disembedding* resulted in significant blindspots. As Jens Beckert pointed out, by seeking distance from the normative implications of the notions of embedding/disembedding, new economic sociology also turned away from studying the macrological societal and political effects of processes of economization (Beckert 2009). Furthermore, new economic sociology also lost the ecological and material dimension of economic life that Polanyi’s tale of (dis)embedding had kept central. The program of embedding economies in the “so-

cial” – that is, in networks, states, institutions – offered no substitute for what has been left behind. As many debates about sociology, new materialism, and technology in recent decades have shown, the “social” as it has been defined in this discipline was built on “fossil capital” or “fossil modernity” without any proper account of it (Malm 2016; Mitchell 2013). In sum, the attempt to make neoclassical economics “more real” by adding and stirring the social into the mix ignored that this novel ingredient had problems and omissions of its own. The dematerialized account of economic order became coupled with an equally dematerialized and narrow account of social order.

Ecologizing – but how, what, and where?

How can economic sociology be ecologized? Do sociological economists now have to become ecologists? Ecologization is a different undertaking than embedding a given social entity in a pre-given ecological system – for the simple reason that there is no pre-given ecological system into which social-cum-economic orders can be placed. First, natures are coproduced with cultures, most dominantly so in the age of the Anthropocene (Cronon 1983; Descola 2014; Moore 2016). Economic ecologies emerge in processes of co-constitution, some are benign, others are catastrophic – for humans and more-than-human-species alike. Ecology is not a benign order; it is not a bigger system into which social order can be put, nor does it represent a normative ideal of a good society (Latour 2009). Second, our conceptualization of the ecological system has a history, just as sociology and economics have as respective disciplines (Sprenger 2019). Economy, ecology, and sociology are rivals and partners in shaping discourses of how order is possible. They share concepts such as cooperation, competition, conflict, systems, interests, and dependencies. The recent rise of the concept of resilience is a case in point. While it emerged as an ecological concept, it is now used for understanding social cohesion, psychological strength, and the security of the financial system alike (Walker and Cooper 2011; Nelson 2014). We speak of the “resilience of finance” and the “sustainability of debt” – without necessarily having to wonder about the mingling of economic and ecological meanings and without taking note of the material dependencies involved in debt and finance. Given these conceptual histories and overlaps, what should and could ecologizing economic sociology mean?

One pragmatic point of departure is the most recent take on (dis)embedding that has been developed by scholars working in adjacent fields, such as

cultural economy, social studies of finance, and heterodox Marxist political economy (Callon and Muniesa 2005; Best and Patterson 2010). These fields have slightly reframed the meaning of embedding and disembedding – implicitly or explicitly. They suggest starting with the observation that practices of disembedding, abstraction, or disentanglement indeed define modern economic practices and forms: goods, labor, services, or resources are made rationalizable, transferable, valuable, saleable, investible by disentangling them. At the same time, such disentanglement is itself embedded, so to speak, since such processes depend on political, technical, and calculative relations, practices, and tools which make disentanglement successful, possible, operative, and, not to forget, hegemonic.

In this research perspective, many scholars have already started working on questions of ecologization. They have been analyzing how “nature” has become a disentangled value, a commodity, a financial claim, or has been reframed as an “ecosystem service” to be part of offsetting regimes. Especially the financialized politics of climate adaptation have been looked at in terms of regulatory design of carbon markets (Engels 2006), in terms of practices of classification and valuation that define “green” finance, as knowledge infrastructures of risk (Folkers 2024), or as a question of compensation for loss and harm (Elliot 2021). The limits of translating “nature” or “material interdependencies” into financial portfolios, carbon credits, values, or taxonomies has been highlighted (Fourcade 2011). Scholars have problematized the reduction of the climate issue to a single denominator of CO₂ (Langley et al. 2021) and have criticized the selective perception of risk and the lack of properly penalizing further investment in fossil fuels (Chiapello 2020).

This study of the modes and limits of ecologization can and should be pushed further by paying more attention to the mobilization of matter and multispecies interdependencies involved. There are some models for doing this. In the following section, I take the example of economic futures as a case for probing how a more material and ecological perspective might be gained. For this purpose, I selectively discuss some works in the environmental humanities and energy humanities that help to interlace the study of economic futures with ecological ones. My key point is that ecologizing one’s perspective is greatly stimulated if the methodologies for studying economic futures give more weight to spaces, “patches,” and land. Futures are not just financial papers traded in rooms and dealt with on desks: they belong to acts of terra-forming, social-political hierarchies, and the shaping of species living.

Landing futures

Questions of temporality and especially futurity have become important venues for rethinking finance, debt, and processes of capitalization over recent years (Levy 2017; Tellmann 2020; Adkins, Bryant, and Konings 2023; Suckert 2022). Instead of taking economic calculations and valuations at face value, cultural economy, economic sociology, and social studies of finance have dissected the social conventions of valuation, the role of affects like hope or fear, the fundamental question of trust and imagination, and the devices of obligation at work in making financial futures durable (Beckert 2013; Callon and Muniesa 2005; Holmes 2014; Tellmann 2017; 2021; Zaloom 2009). In sum, the cultural, political, and social conditions of the possibility of making economic futures hegemonic have been explored.

But what about ecology? If politics, cultures, and social orders paradoxically “embed” economic futures, how are we to address the intersections of economic, ecological, and social futures? If economic futures are not just made by calculating the risks of derivatives, managing portfolios, trading algorithms, valuating and pricing them, but also through the modulation, disruption, and reorganization of material and (multi)species temporalities, how does this show up in economic sociology and to what extent and end?

In the seminal book *Nature's Metropolis*, William Cronon tells the history of economic futures on grain, regulated by the Chicago Board of Trade and traded on the stock market. The chapter on financial futures starts with an unlikely place from the vantage point of economic sociology: the prairie grass, the soil, and the specific breeding histories of corn and wheat. It goes on to recount the development of the transportation system and somewhat unexpectedly comes to focus on the invention of the steam-powered grain elevator. According to Cronon, the elevator became crucial because it turned an individually owned sack of grain into a “golden flow.” It enabled the emergence of an “abstract claim on the gold stream flowing through the city's elevators” and thus “effectively created a new form of money, secured not by gold but by grain” (Cronon 1991, 120). In this way, a “transmutation of one of humanity's oldest foods” took place, “obscuring its physical identity and displacing it into the symbolic world of capital” (Cronon 1991, 120). What interests Cronon is showing how the physical and the financial become interconnected in multiple ways – both through a material-symbolic connectivity between soil, seed, farming, transportation, and property rights *and* through an intersection of price signals, expectations, and capital influx. However distant and incomprehensible the Chicago Board of Trade appeared to

the farmers, and however disconnected the ecology of the prairie appeared to the traders, both have material-spatial as well as symbolic-monetary links that are forged together. For Cronon, the main point of this story is to show how the perception of “nature” as being out there, apart from the city, ignores myriad relations of material conditioning.

Within the context of the current argument, Cronon's pioneering work of interlacing natural and human history is instructive in two ways: First, he demonstrates that telling the history of financial futures need not and should not confine itself to the traders, regulators, stock market, and price signals – even though this is of course of utmost importance. Second, Cronon succeeds in establishing a connection between finance and soil, between grain and financial claim *because* he makes space, land, and soil his vantage point. He approaches the city through its *Hinterland*, moving back and forth between the different human and more-than-human worlds. In other words, a multi-sited, or landed, story about financial futures becomes the methodological key for materializing and ecologizing the history of economic futures.

Timothy Mitchell's recent work on the connection between infrastructure and capital develops a kindred perspective. He argued that the “speculative fragility” and the “world of financial promises” had a condition of possibility in the colonial history of large-scale infrastructure projects and corporate ownership (Mitchell 2014, 438): “the future flow of income” claimed the “long-lived equipment” as its guarantee, and “capital bulked itself up through the scale and longevity of the material grids of modern collective life, and then traded the expectation of this future income by selling speculative shares in the present.” The history of capitalized futures becomes tied to the materiality of infrastructure and multispecies living while still attending to the regimes of labor and care. As Mitchell argued in his book *Carbon Democracy* (2013), the materiality of oil came to underpin the dematerialized conceptions of “the economy” that could be steered towards future growth in the postwar world. The economists “laid out the no-man's land” between “nature and politics” by rendering the materiality and ecology of the energy system invisible (Mitchell 2013, 241). Mitchell renders this link visible by focusing on the international relations of power as well as the labor regimes that secured its flow towards the Western states. Mitchell's argument about economic futures depends, like Cronon's, on a particular methodological stance. He tells the history of economic futures by starting from “other spaces”: the countries and locales of energy extraction. He works from the outside in, instead of the inside out, by linking the study of economic futures to different sites, or lands.

Most recently, Anna Tsing has pushed this argument on the methodologies of space most forcefully. She and her coauthors suggest studying the Anthropocene through the concept of the “patch,” a landscape formed by economic and productivist, infrastructural changes that show the making of the Anthropocene and its effects: “Patches make the Anthropocene” (Tsing et al. 2024, 1). They trace ecological interdependencies through the concept of “feral biologies.” With this term, Tsing and her coauthors refer to the unplanned and unintended effects that monocultural, intensified, and rationalized modes of production have. They produce or induce responses of other species and matter which make the ecological entanglement of all involved palpable. While feral biologies can in principle be benign or catastrophic, they will currently most likely result in worlds inhospitable to humans through the proliferation of sickness and pollution, as well as the reduction of livable spaces. As the authors point out, the spatial focus aids understanding of the “heterogeneity of time” since “temporal coordination – and discontinuities – are key elements of the Anthropocene” (Tsing et al. 2024, 3). The making or unmaking of futures is again observed by making land, landscapes, or patches into a methodological point of departure.

Taking up the task of linking the study of futurity and temporality by turning to the patch is not foreign to the history of economic sociology. In some ways it is a return to Polanyi’s insight into the importance of land for telling the story of disembedding: “What we call land is an element of nature inextricably interwoven with man’s institutions” (Polanyi 1957, 178). He calls it the “weirdest of all undertakings of our ancestors,” to subjugate land to what he called the self-defeating creed of the “self-regulated market” (Polanyi 1957, 178). To Polanyi, land stands for nature, but land is much more: it is social, symbolic, physical all at once, for it is habitat, political territory, soil, and landscape, which is interwoven with social relations. Among labor, land, and money – the three fictitious commodities that Polanyi set out to describe as impossible to subject to market exchange tout court – land demonstrates most intensely and most violently the consequences of particular modes of (dis)embedding. Land becomes a litmus test for how disembedding is put into motion and plays itself out. Land, patches, landscapes – these are not natural foundations from where economic-cum-social order is deduced, but lo-

cales in which the coproduction of ecologies/economies become observable.

Coda: Overcoming the denials of the social

New economic sociology hoped to rectify the abstractions and factiousness of economics by making it more “real.” But the social thus is itself defined by how it selects the perception of its “environment,” however this term is defined. As Luhmann put it lucidly four decades ago in a text about the ecological problem: “One does not have to be asocial to ruin society; indeed, maybe the disaster occurs exactly because of one’s sociality” (Luhmann 1988, 47; own translation). Instead of taking the social as making economics more real, the question of the social should be approached in terms of how it shields perception of feedback cycles, how it offers immunity against ecological interdependencies, and how it habitually, if not cognitively, ingrains denials of what it means to live in a “critical zone” of livability that depends on the more-than-human biosphere. Economic sociologists can use sociological expertise to explain and account for how economic life allows for ignorance, immunity, and denial.

The task of overcoming the denials of the social is not a one-sided affair. The contribution of economic sociologists might be to strengthen a more symmetrical account of the social and the ecological, without trading one for the other. The task is to understand how hierarchies of exposure, uneven distribution of security, and selective granting of livable spaces concern human and more-than-human species alike. Again, the methodologies of land benefit such symmetrical perspective. If we study economic futures in patches, the social, ecological, and material dimensions are already intermingled. Economic sociologists are well-equipped to trace how futurity is produced, distributed, and colonized unevenly – within, across, and beyond the social. When economic sociologists start from “other spaces” for extending their tales of (dis)embedding to include material and more-than-human livability, they are more than well-equipped to understand the economic ecologies/ecological economies of the Anthropocene.

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