



INCORPORATING COMPARISON IN ONTOLOGICAL ENCOUNTERS

Philip McMichael¹
Cornell University

Abstract: This essay problematizes comparative analysis by collapsing the convention of assuming independence of units (eg, nation-states) compared. Since social units form relationally, the comparative method is more usefully employed to investigate their world-historical conditioning. Here, comparison is ‘incorporated’ in the very substance of inquiry into the mutual formation of such units. And, given cultural diversity and non-linear world-history, ‘incorporated comparative analysis’ can be deployed to examine historic cultural encounters, taking account of their distinctive ways of being in the world. This in turn challenges the Eurocentrism of conventional cross-national comparative epistemology. Accordingly, this method analyzes the historic interdependence of distinct ontologies: ‘economic’ and ‘ecological,’ representing the encounter between European and non-European cultures in the era of capitalist modernity. The argument is they are comparable precisely because their defining ontologies form relationally. It concludes that this allows insight into the tensions and possibilities of the current global conjuncture.

Keywords: Comparison; Economy; Ecology.

INCORPORANDO A COMPARAÇÃO EM ENCONTROS ONTOLÓGICOS

Resumo: Este ensaio problematiza a análise comparada demolindo o procedimento convencional que assume a independência das unidades comparadas (por ex., Estados-nação). Como unidades sociais se formam de maneira relacional, o emprego do método comparado será mais produtivo na investigação de suas condicionantes histórico-mundiais. Aqui, a comparação é “incorporada” à própria substância da investigação sobre a formação mútua de tais unidade; e, por causa da diversidade e da não-linearidade da história mundial, a “análise comparativa incorporada” pode ser usada no exame de encontros culturais históricos, levando em conta seus modos próprios de existir no mundo – algo que, por sua vez, desafia o eurocentrismo presente na epistemologia comparativa transnacional convencional. Tendo por base o método da comparação incorporada, o artigo aqui proposto analisa a interdependência histórica de ontologias distintas: a “econômica” e a “ecológica”, representando o encontro entre culturas europeias e não-europeias na era da modernidade capitalista. O artigo sugere que ambas são comparáveis precisamente porque as ontologias que as definem se formam de maneira relacional. E conclui que a abordagem da comparação incorporada lança novos olhares sobre as tensões e as possibilidades da conjuntura global que vivemos atualmente.

Palavras-chave: Comparação; Economia; Ecologia.

Introduction²

Conventional comparison typically occurs within, and indeed constitutes, a singular ontology. That is to say, it operates on the assumption that units being compared inhabit a singular universe. For example, comparing states, as differentiated political units, assumes a unified international system of states.

¹ E-mail: pdm1@cornell.edu.

² Thanks to Sandra Comstock, Tanya Casas and Dia Da Costa for help with an earlier version of this.

While comparison may be of historical processes, nevertheless it operates within a categorical universe with ontological underpinnings. The object of inquiry may be historical transition, but it is ordered by the categories in play – categories given in the present and with standardizing referents. Nisbet³ has made the point that the comparative method originated (from Europe) in the ‘developmental divide’ between Europe and the non-European world. For the point I am making, this is analogous to Marx’s methodological directive:

Capital is the all-dominating economic power of bourgeois society. It must form the starting-point as well as the finishing-point, and must be dealt with before landed property.... It would therefore be unfeasible and wrong to let the economic categories follow one another in the same sequence as that in which they were historically decisive. Their sequence is determined, rather, by their relation to one another in modern bourgeois society, which is precisely the opposite of that which seems to be their natural order or which corresponds to historical development.⁴

That is, from a particular historical/methodological perspective, what is universally dominant or emergent defines the unit of analysis. And this is what informs the terms of comparison. Necessarily, the lens through which such analysis is conducted generally proceeds from, and reproduces, a self-referential (typically Eurocentric) ontology. The point is to identify variation among subsets of cases – for instance, differential trajectories of state-formation, or the sub-division of states as ‘developed’ or ‘underdeveloped’ according to a standard of modernization.

Here, conventional social-scientific comparison, in deploying a Eurocentric lens as the source of ‘social universals,’⁵ abstracts from the very historicity of Eurocentrism.⁶ Modernization studies, for example, carry a linear, or hierarchical,

³ Nisbet, 1969.

⁴ MARX, Karl. **Grundrisse**. New York: Vintage, 1973. p. 107.

⁵ As de la Cadena puts it, in relation to Eurocentric construction of a universal, rather than pluriversal, politics: ‘Politics emerged (with science) to make a livable universe, to control conflict among a single if culturally diversified humanity living in a single scientifically knowable nature’ (Cf: DE LA CADENA, Marisol. Indigenous cosmopolitics in the Andes. Conceptual reflections beyond “politics”. **Cultural Anthropology**, v. 25, n. 2, p. 334-370, 2010. p. 359).

⁶ Thus modernity presents an ‘autocentric picture of itself as the expression of a universal certainty, whether the certainty of human reason freed from particular traditions, or of technological power

assumption regarding the ordering of world regions. Here, development is conceived in singular, evolutionary terms, overlaid on a diverse world already complicated in its diversity by the multiple relations of colonialism.⁷ Nevertheless, at the inception of the mid-twentieth century 'Development Project, post-colonial regions and states were ranked along a development sequence.⁸

Such a 'developmental divide' constructs a political ontology to order the world.⁹ This was expressed at the time via institutionalizing the UN System of National Accounts (1945). These accounts represent a universal quantifiable development metric, which is quite reductionist in informing the construction of categories of modernity via price-based measures, which then serve as proxies for comparison.

Such comparative categories standardize modern world history in such a way as to reify states as *individual* vehicles and expressions of a common 'development' sequence. This is the *formal* dimension of comparison, critiqued by world-system analysis, which views 'development' as a property of the whole world-system, rather than states as such.¹⁰ In turn, this 'world-system' approach has been critiqued via the concept of 'incorporated comparison'.¹¹ This offers a *substantive* form of comparison, which makes no prior assumption about the units of comparison, viewing such units as constructed precisely *through* comparison, since socio-political domains are inter-related, rather than separately distinct. In this sense, comparison is *incorporated in and through the relations forming* the very units compared.

freed from the constraints of the natural world' (Cf: MITCHELL, Timothy (Ed.). **Questions of Modernity**. Minneapolis: U of Minnesota, 2000. p., xi).

⁷ PATEL, Raj; MOORE, W. **A History of the World in Seven Cheap Things**. Oakland: University of California, 2017.; HALPERIN, 2012.

⁸ MCMICHAEL, Philip. **Development and Social Change: A Global Perspective**. Thousand Oaks: Sage, 2016. 6th edition.

⁹ Cf: DA COSTA, Dia; Philip MCMICHAEL. The poverty of the global order. **Globalizations**, v. 4, n. 4, p. 593-607, 2007. Connell claims the sociological canon has reproduced a progressive social trajectory via 'othering:' meaning 'the difference between the civilization of the metropole and an Other whose main feature was its primitiveness' (Cf: CONNELL, R.W. Why is Classical Theory Classical? **American Journal of Sociology**, v. 102, n. 6, p. 1511-1557, 1997.).

¹⁰ WALLERSTEIN, Immanuel. **The Modern World-System**. New York: Academic Press, 1974.

¹¹ MCMICHAEL, Philip. Incorporating comparison within a world-historical perspective: an alternative comparative method. **American Sociological Review**, v. 55, p. 385-397, 1990.; MCMICHAEL, Philip. World-systems analysis, globalization and incorporated comparison. **Journal of World-System Research**, v. VI, n. 3, p. 68-99, 2000.

There are two parts to this critique in response to Wallerstein's *singular* world-systemic unit of development. First, world capitalist history is irregular, and states do not simply distribute invariably across three sub-regions of the world-system (core, periphery, and semi-periphery). Rather, social and political processes are inter-woven across space, where commodity frontiers, settlement patterns, trade circuits and technologies distribute according to changing geopolitical, geoeconomic and geocological conjunctures. Such distributions do not conform to a common, enduring pattern, rather they express changing world-historical conjunctures, where development patterning is fluid, and likely inconclusive.

To conceptualize such a conjunctural global formation requires its reconstruction as a 'complex of many determinations,' in similar fashion to Marx's 'method of political economy:' concretizing social phenomena or events as the product of specific historical relations.¹² Here, a different form of '*incorporated* comparison'¹³ serves to bring such constructs (eg, temporal phases, regional spaces, states, commodity chains, economic or cultural processes, social movements) into relation with one another as forming, and formed within, a larger spatio-temporal whole (such as a world order, international regime, transnational commodity complex, capitalist world economy) of which they are formative parts, or instances.¹⁴

Ultimately, there is no invariable structure of world capitalism, rather it must be progressively constructed and reconstructed in temporal and/or spatial

¹² MARX, Karl. **Grundrisse**. Op. Cit.,

¹³ The concept of 'incorporated comparison' critiques comparative conventions that examine the world through reified categories attributing independence to nation-states as the political units of modernity and modernization. Arguing that states and social entities are formed relationally, 'incorporated comparison' proposes the embedding of comparison within historical inquiry in such a way as to see social entities as mutually conditioning. As such, they constitute parts of a 'self-forming whole,' as a contingent, historical totality, in which the entities themselves realize the totality, rather than it being an *a priori* derivation from a systemic concept, like 'the capitalist world-economy' (and, in this sense, replicating the categorical building blocks of a given discourse of modernization).

¹⁴ Cf: MCMICHAEL, Philip. *Incorporating comparison within...* Op. Cit.; MCMICHAEL, Philip. *World-systems analysis ...* Op. Cit.

'Incorporated,' rather than 'relational' (Hart, 2016), comparison compares units of observation ('parts') of a provisional (rather than a pre-determined) unit of analysis ('whole'), formed/concretized via a relational complex composed of such units of observation.

terms -- depending on what is to be explained, or interpreted.¹⁵ Here, the categories we deploy in analysis of capitalist developments, cannot be reified, rather they find their meaning and import within a historical complex of determinations and processes.

The second issue concerns the *content* of comparative development analysis, namely the ontological assumptions that govern how we live in the world, and in particular how we produce our material conditions of existence. This essay addresses this second issue: how to transcend the ontological assumptions embedded in the conventions of the comparative method. In particular, my goal is to problematize these assumptions by considering the silences embedded in social scientific discourse regarding the '*earthly*' dimensions of our conventional social categories (such as 'state, economy and society' as the building blocks of the modern world). Here political ecology makes its entrance.

Arguably, the separation of political-economy and ecology can be viewed at one level as a distinction made between the *rationalism* of modern political culture (and its categories) and the *complexity* of ecological cultures (often characterized as 'traditional' or pre-scientific). Such distinctive understandings of world ordering nevertheless 'encounter' one another in historical time, as modernity realizes its ecological underpinnings, simultaneously subordinating *and* clarifying ecology, as I outline below. While such an encounter is political, and may be essentialized, the juxtaposition of political-economy and ecology renders them objects of comparative inquiry. In my view, this engagement invokes the method of incorporated comparison. While it could also be said that ecology and modern political culture are distinct, being quite different constructs in epistemic terms, nevertheless they come to condition one another in the modern world, establishing an unmistakable relational conjuncture (a 'self-forming whole') expressing the contradictions attending such interaction.

¹⁵ Cf: TOMICH, Dale. **Through the Prism of Slavery**. Lanham, MD: Rowman & Littlefield, 2004.

Ontological encounter

The ontological assumptions of conventional comparison are increasingly in question today. First, there is growing recognition of the artificiality of conventional comparison, which objectifies its categories – normative categories whose boundaries are increasingly in question, whether because of growing recognition of ‘co-production’,¹⁶ or because of displacement/override by, for example, new (transnational) forces.¹⁷ Second, elaboration of a series of categories to analyze or legitimize modern change has preoccupied the social sciences, as an ‘exercise in modernity’ (knowledge construction) at the expense of situating the modern world both in time and in ecological space.¹⁸

Commenting on the transition from theology to an increasingly fractured and haphazard array of scientific and disciplinary “information,” Colin Duncan complains: ‘Instead of rethinking our possible role on the planet, instead of qualifying or revising our anthropocentric habits, we have shamelessly used the decline of theology relative to science as an excuse to elevate our own importance further. Logically we should have replaced theology with ecology, before enlarging the parameters of our behaviour by the heavy use of fossil fuels.’ Furthermore, ‘Compared to the planet our species has not been around for long, but compared to what historians or sociologists talk about, we certainly have. For too long, and for absolutely no good reasons, the human past has been seen as excessively

¹⁶ HOPKINS, Terence K. World-system analysis: methodological issues.’ *In*: KAPLAN, B.H. (Ed). **Social Change in the Capitalist World-Economy**. Beverly Hills: Sage, 1978. p. 199-218.; MCMICHAEL, Philip. Incorporating comparison within... Op. Cit.; ARRIGHI, Giovanni. **The Long Twentieth Century**. London: Verso, 1994.; ARRIGHI, Giovanni; SILVER, Beverly. *Chaos and Governance in the Modern World-System*. Minneapolis: University of Minnesota, 1999.; MONGIA, Radhika. Historicizing state sovereignty: Inequality and the form of equivalence. **Comparative Studies in Society and History**, v. 49, n. 2, p. 384-411, 2007.; HART, Gillian. Denaturalizing dispossession: critical ethnography in the age of resurgent imperialism. **Centre for Civil Society Research Reports**, v. 1, n. 27, p. 1-25, 2005.

¹⁷ FERGUSON, James; GUPTA, Akhil. Spatializing states: Towards an ethnography of neoliberal governmentality. **American Ethnologist**, v. 2, n. 4, p. 981-1002, 2002.

¹⁸ Bruno Latour has put it this way: ‘the modern critique did not simply turn to Nature in order to destroy human prejudices. It soon began to move in the other direction, turning to the newly founded social sciences in order to destroy the excesses of naturalization. This was the second Enlightenment, that of the nineteenth century ... the critical power of the moderns lies in this double language: they can mobilize Nature at the heart of social relationships, even as they leave Nature infinitely remote from human beings; they are free to make and unmake their society, even as they render its laws ineluctable, necessary and absolute. ...Native Americans were not mistaken when they accused the Whites of having forked tongues’ (LATOUR, Bruno. **We have never been Modern**. Cambridge: Harvard University, 1993. p. 35, 37, 38).

discontinuous, temporally broken down into putative “stages” and/or “revolutions”.’ Duncan’s point is ultimately that the modern sciences have been so preoccupied with human history from the dawning of an agricultural civilization, that ‘people who lived before agriculture have been condemned to what has been called, with breathtaking arrogance: “pre-history”... [and that] because historians in particular refused to consider humans in deep time that modern science has actually had no ecologically relevant cultural impact, at least not yet’.¹⁹

This essay explores the possibility of recognizing the emergence of alternatives to the ‘human sciences,’ as dismissed by Duncan, through what I shall call ‘ontological encounters,’ between the economic paradigm and ecologies. The former represents the dominant ontology (reality belief, truth claim, or organizing principle), which I call the ‘economic calculus.’ Polanyi’s term for this ontology was ‘economic liberalism,’ an assumption that humans have a natural/generic motive for ‘self-gain,’ for which the most appropriate institution is the ‘self-regulating market’.²⁰ Polanyi viewed this belief as the ‘economist fallacy,’ whereby subjection of society to a ‘disembedded’ (unregulated) market risked ‘annihilation’ of ‘the human and natural substance of society.’

While Polanyi’s vision was largely metaphorical, we can draw some useful observations from his preoccupations. Arguably, Polanyi’s concept of ‘fictitious commodities’ (land, labor and money) paralleled Marx’s notion of the fetishism of commodities (value, as price, concealing constitutive social relations). That is, Polanyi identified the artificiality of value relations insofar as they were coming to govern social life in Europe – in two senses, as an ideology misrepresenting the (politically instituted) market as a natural construct, and discounting (thereby threatening) the biophysical foundations of society. The ontology of the economic calculus, then, was reductionist and bound to generate countermovement drawing on overridden principles of social and ecological health. Elsewhere, I have referred

¹⁹ DUNCAN, Colin. ‘The practical equivalent of war? Or, using rapid massive climate, change to ease the great transition towards a new sustainable anthropocentrism.’ 2007.

²⁰ POLANYI, Karl. **The Great Transformation**. Boston: Beacon, 1957 (1944).

to this as a form of ‘epochal comparison of the utilitarian conception of “economy” with a substantivist pre-capitalist conception’.²¹

My point is that Polanyi models the kind of ‘ontological encounter’ in play, in particular underscoring that an ontology such as the ‘economic calculus’ is neither independent and objective, nor is it sustainable. The ideology of self-adjusting markets was very much a historical product, and yet, as such, it invisibilizes alternative organizing principles (with perilous consequences). Understanding the act of erasure, and its consequences, invokes a form of incorporated comparison, where ‘comparison becomes the substance of the inquiry rather than its framework’.²² Comparison is substantive for two key reasons: first, it reveals the *interdependence* of these two ontologies, and second, this interdependence is historical in the sense that such an encounter forces mutual translation (whether in ecological accounting or political-ecological struggles to preserve/sustain environments). With respect to historicity, we can take from Polanyi (and Marx of course) that the market principle is a political construct, even as it seeks to override/appropriate its alternatives. The latter are several, but the key one today, as Duncan notes, is the ecological principle.

As suggested, the reductionism of an economic calculus is that it necessarily (through a series of material contradictions) invokes a different, ecological calculus, as a more robust answer to the material crisis the world is facing. The contradictions express the ontological divide between two distinct organizing principles, or, as Martinez-Alier²³ puts it, two ‘languages of valuation.’ These principles are necessarily historical, and, as such they can be understood as mutually conditioning, and subject to incorporated comparison. In this essay, I propose a form of comparison in which the (ontological) encounter between these principles expresses an unfolding totality.²⁴ Put another way, the growing

²¹ MCMICHAEL, Philip. Rethinking comparative analysis in a post-developmental context. **International Social Science Journal**, v. 133, p. 351-365, 1992. p. 360.

²² MCMICHAEL, Philip. Incorporating comparison within... Op. Cit., p. 386.

²³ MARTINEZ-ALIER, Joan. **The Environmentalism of the Poor**. A study of ecological conflicts and valuation. Cheltenham: Edward Elgar, 2002.

²⁴ While this may invoke Tsing’s creative construct of ‘traveling universals’ where ‘global environmentalism’ for example emerges through dialogues between distinct cultural understandings of the environment (TSING, Anna Lowenhaupt. **Friction. An Ethnography of Global Connection**. Princeton: Princeton University, 2005. p. 153), my point is different for two

ecological challenge to the economic calculus offers the possibility of an emancipatory solution, posited through the methodological device of incorporated comparison.

The ontological encounter between the economic, and an ecological, calculus is inherent in the history of capital. This is implicit in Marx's methodological directive regarding the subordination of agriculture to capitalism, quoted above. The process by which capital subsumes land into its value relations has ecological consequences, some of which are represented in the retort (inverting Marx's directive) of the international peasant coalition: 'Land provides the base for all human life. Land, appropriately called Mother Earth by the natives of the Americas, feeds us: men, women, boys and girls; and we are deeply bound to her'.²⁵ The question becomes, then, under what circumstances do capital's value relations meet/recognize their ecological limits? The answer lies in the relational encounter between the economic, and an ecological, calculus. This is an ontological encounter represented first in epistemic form, and second in the material contradictions we call the triple (food, financial and climate) crisis.

Epistemic dimensions

In this section, I critically examine Marx's theory of value in relation to the ecological principle. Arguably, Marx's theory of value is two-sided. On the one hand, he develops it as a logical reconstruction of the movement of capital, as a social relation premised on the commodity labor-power. As such, value theory enables methodological discovery of the fetishism of commodities concealing the social relations underlying the price form. Through this exercise, Marx establishes the point that political economy objectifies exchange, endowing 'economy' with a life of its own, or normalizing the market. On the other hand, since this method uncovers, and enables recovery of, the 'social,' it offers emancipatory possibility.

reasons. First, Tsing's traveling universals are deliberately fragmented in their treatment, Tsing being skeptical of theory as totalizing, and thereby avoiding historicizing (theorizing) the political-economic conjuncture constituted by her various 'frictions.' And second, my argument is not about concretizing universals (friction), rather it is about understanding the historicized encounter between two hitherto distinct ontologies.

²⁵ La Vía Campesina, 2000.

It is perhaps becoming commonplace to observe that Marx's theory of capital accumulation lacks, or at least discounts, an ecological dimension (see, in particular, Moore).²⁶ Capital theory depends logically on the concept of value, understood as a social relation. The foundational assumption is that capital has no historical or logical meaning outside of its relationship to labor-power. And this is premised on the separation of labor from its means of subsistence through the act of primitive accumulation. The theory of capital accumulation (as a logical construct) proceeds from this historical fact. But this historical fact is not simply about the alienation of labor-power, but also it is about the separation of labor from nature. However, in consequence of the logical focus of the theory of capital accumulation, as the basis for the critique of political economy, ecological relations are discounted or eliminated from consideration.

Narratives (usually orthodox) of capital accumulation, as translations of Marx's theory of capital to histories of capital, necessarily reinforce this one-sided view of modern history.²⁷ Arguably, there are two explanations for this condition. First, the point of departure of Marx's critique was political economy's understanding of value, which discounted nature beyond accounting for variation in land fertility, represented as differential ground-rent value. By focusing his critique on the very relations privileged by economic liberalism, Marx's interpretation of social reproduction under capitalism privileges those relations (albeit in different form) as suggested in the following claim in *Grundrisse*:

It is not the unity of living and active humanity with the natural, inorganic conditions of their metabolic exchange with nature, and hence their appropriation of nature, which requires explanation, or is the result of a historic process, but rather the separation between these inorganic conditions of human existence and this active existence, a separation which is completely posited only in the relation of wage labour and capital.²⁸

²⁶ The burgeoning literature on the 'metabolic rift' notwithstanding (FOSTER, J.B. **Marx's ecology: materialism and nature**. New York: Monthly Review, 2000.; MOORE, Jason. Environmental crises and the metabolic rift in world-historical perspective. **Organization & Environment**, v. 13, n. 2, p. 123-57, 2000.; SCHNEIDER, Mindi; MCMICHAEL, Philip. Deepening, and repairing, the metabolic rift. **The Journal of Peasant Studies**, v. 37, n. 3, p. 461-484, 2010.).

²⁷ Cf: MCMICHAEL, Philip. Revisiting the question of the transnational state. **Theory & Society**, v. 30, n. 2, p. 201-210, 2001.; TOMICH, Dale. Op. Cit.

²⁸ MARX, Karl. **Grundrisse**. Op. Cit., p. 489.

Second, subsequent Marxist histories of capitalism have mirrored conventional modernist narratives insofar as ecological relations have been sidelined in the focus on 'capital accumulation' or 'development.'²⁹ A prominent example is the threshold critique of the modernist narrative of development by Andre Gunder Frank.³⁰ His formulation of the 'development of underdevelopment' proposed a relational dynamic animated by the unequal relations of capital accumulation on a world scale, nevertheless devoid of ecological relations.

What Frank's conception proposed was a systematic understanding of the colonial relation between metropole and periphery accounting for European dominance and non-European subordination, in economic (capital accumulation) terms. That is, it challenged notions that all world regions would necessarily follow a development path forged by the West. In one sense, Frank's intervention unsettled the implicit comparative episteme embodied in the notion of 'development.' Henceforth, the assumption that the European and non-European worlds could be compared along/across a linear trajectory of development was now a subject of substantive debate. While conventional social science continues to reify nation states as individual/separate containers or expressions of development, dependency or world-systems approaches challenge this initial assumption with the kind of relational episteme of a 'development of underdevelopment' formulation.

In another sense, however, Frank's (and subsequent) formulations have not been able to entirely shed developmentalist ontology. In one way or another, world-systemic theories continue to attribute the development standard to the metropolitan world, even as they maintain that what happens in the metropolitan world cannot be understood outside of global relationships.³¹ And even as the linear dimension of developmentalism is problematized, the actual content of development remains governed by a capital accumulation episteme. In other

²⁹ A notable exception is Moore (MOORE, Jason. Environmental crises... Op. Cit.; MOORE, Jason. The modern world-system as environmental history? Ecology and the rise of capitalism. **Theory and Society**, v. 32, p. 307-377, 2003.).

³⁰ FRANK, 1967.

³¹ See MCMICHAEL, Philip. World-systems analysis... Op. Cit.

words, whether Marxist or mainstream, theories of development retain a singular ‘capitalocentric’ focus.³²

Accordingly, the capitalocentric focus dominates international political economy and development policy, reinforcing an ontology (an implicit organization of the world) that externalizes ecological relations. The proof of the pudding lies in the fact that the current global crisis is not just of capital but of the environment (and these ‘domains’ are necessarily inter-related). While capital may have contributed to the environmental crisis, capital cannot solve it – despite proliferating forms of ‘full-cost accounting.’ In fact the latter is one concrete expression of the political ontology of capital, the attempt to resolve environmental crisis through the pricing of nature. As Marx would remind us, this represents a deepening of commodity fetishism through the reduction of natural processes and relations to a singular price metric.

Nevertheless, where ‘capital is the all-dominating economic power of bourgeois society,’ it also governs the critique. This method of critique appears to eliminate ecological relations. Marx was certainly aware of the significance of the need for a sustainable social/natural metabolism. Indeed he claimed the ‘conscious and rational treatment of the land as permanent communal property [is] the inalienable condition for the existence and reproduction of the chain of human generations’.³³ However, his analytical point of departure concerns (the relational origins of) value, as a *social* substance produced by capital through the application of labor-power.

For Marx, the application of labor-power is at one and the same time the transformation of nature, appropriating its natural wealth as use-values. Nature is not so much a-social, as residual, in this representation. The above quote from Marx regarding the unity of social/natural processes underlines the materiality of social life and its mutual conditioning with the natural environment. But value theory overrides this relationship, losing sight of conscious ecological practices at

³² Cf: GIBSON-GRAHAM, J.K. **A Post-Capitalist Politics**. Minneapolis: University of Minnesota, 2006.

³³ Quoted in FOSTER, J.B. **Marx’s ecology: materialism and nature**. New York: Monthly Review, 2000. p. 164.

odds with capitalist value relations. Elsewhere I have argued that this oversight stems from the circumstances of the 'metabolic rift' -- a concept by which Marx dates the rise of capitalism in the rupturing of agricultural nutrient cycles as the social division of labor between town and countryside develops, expelling populations from the land and converting agriculture to an input-output operation as industrialization proceeds.³⁴

The point here is that *given* the metabolic rift, value relations claim ontological priority. Thus the conversion of agriculture to a branch of industry privileges capital in its subordination of landed property, reconstituting 'landed property' through the lens of capital. Such an inversion occurs in the structure of thought as well, superimposing a capitalist logic on history (as opposed to historicizing capitalism).

However, so long as we recall the historical fact of the metabolic rift, namely that it is a foundational story deriving from an original social/natural unity in production, it is possible to invert the meaning of capital logic to recover the historicity of ecological relations both prior to and alongside of the ongoing conversion of land to capital through the deepening of the mechanism of the metabolic rift.³⁵ And precisely because the concept of value with which Marx works insists on the original unity of labor and nature, this concept anticipates (abstractly) the possibility of alternative expressions of this relationship. That is, 'value' historicizes capitalism as an alienated form of social reproduction, allowing the possibility of its transcendence, to express value in terms other than price (such as an ecological calculus).

Transcendence is, first of all, a matter of recognizing alternative values, beyond the abstract one-dimensional economic calculus associated with neoliberal marketization. The one-dimensionality is double-edged: both reducing value (and cost) to price, and rationalizing space-time relations. Such reductionism is precisely the target of Marx's critique of the fetishism of commodities, that is, the disregard it generates for the conditions under which commodities are produced. And, consistent with the need for historicization, this would include the intrinsic

³⁴ SCHNEIDER, Mindi; MCMICHAEL, Philip. Op. Cit.

³⁵ Cf: TOMICH, Dale. Op. Cit.

devaluation of other life-worlds via the objectification of the market.³⁶ And devaluation involves active erasure of the evolving coproduction of humans and nature, as suggested by a Peruvian Indian, Justo Oxa:

The community, the *ayllu*, is not only a territory where a group of people live; it is more than that. It is a dynamic space where the whole community of beings that exist in the world lives; this includes humans, plants, animals, the mountains, the rivers, the rain, etc. All are related like a family. It is important to remember that this place [the community] is not where we are from, *it is who we are*. For example, I am not *from* Huantura, *I am* Huantura.³⁷

A topical example of market objectification concerns the impact of extractive capitalism on natural regions, formed through socio-ecological relations of indigenous shrimping. Martinez-Alier notes that the extractive imperatives for capital accumulation generate ‘antagonism... between economic time, which proceeds according to the quick rhythm imposed by capital circulation and the interest rate, and geochemical-biological time controlled by the rhythms of Nature, ...expressed in the irreparable destruction of Nature and of local cultures which valued its resources differently’.³⁸ The contradiction between industrial shrimp farming for export and mangrove conservation is expressed in conflicts between *different languages of valuation* (the subject of political ecology). Thus he claims industrial shrimp farming:

entails the loss of livelihood for people living directly from, and also selling, mangrove products. Beyond direct human livelihood, other functions of mangroves are also lost, perhaps irreversibly, such as coastal defence against sea level rise, breeding grounds for fish, carbon sinks, repositories of biodiversity (for example, genetic resources resistant to salinity), together with aesthetic values.³⁹

The multiple values at work here embody a local practicality erased by price abstraction (expressed in the consumer slogan “all the shrimp you can eat”).

³⁶ Thus de la Cadena notes: ‘The relation among worlds was one of silent antagonism, with the Western world defining for history (and with “History”) its superbly hegemonic role as civilizational, and as a consequence accruing power to organize the homogenous life that it strived to expand’ (DE LA CADENA, Marisol. Op. Cit., p. 346).

³⁷ Quoted in DE LA CADENA, Marisol. Op. Cit., p. 352.

³⁸ MARTINEZ-ALIER, Joan. Op. Cit., p. 215.

³⁹ Ibidem. p. 80.

Certified and/or labeled green consumerism may require that consumers pay the full (environmental) 'cost' through a price subsidy, but at what *practical* cost to dispossessed shrimpers whose ecology is irreparably destroyed? And dispossession includes both material deprivation and displacement of practical management of ecosystem knowledge,⁴⁰ despite the market-centric representation of agro-exporting as a source of investments and jobs (rather than of socio-ecological destruction).

In this example of an ontological encounter capital imposes its value relations (as economic calculus) in a region governed by an ecological calculus. The imposition is a claim to universality represented as material improvement (jobs, export revenues, food products), imposing a violent ontology that privileges one (abstracted) life-world via the misconstruction and devaluation of another (practical) life-world. Methodologically, one might say that this example follows Marx's script of capital forming the 'starting point' and the 'finishing point' (in more ways than one) of this scenario. On the face of it, such languages of valuation lack any form of equivalence and meaningful, reciprocal dialogue is ruled out by virtue of the fact that 'the monetary values given by economists to negative externalities or to environmental services are a consequence of political decisions, patterns of property ownership and the distribution of income and power'.⁴¹ In other words, the elaboration of value via the price form, which enables and legitimizes such destructive extraction, is mediated through the politics of the property relation, as an historical encounter.

And, where property fractionates and commodifies ecology, monetary values abstract from, and invisibilize, biological process. Marx noted:

Capital asks no questions about the length of life of labour-power. What interests it is purely and simply the maximum of labour power that can be set in motion in a working day. It attains this objective by shortening the life of labour-power, in the same way as a greedy farmer snatches more produce from the soil by robbing from its fertility.⁴²

⁴⁰ This point is developed in SCHNEIDER, Mindi; MCMICHAEL, Philip. Op. Cit.

⁴¹ MARTINEZ-ALIER, Joan. Op. Cit., p. 150.

⁴² MARX, Karl. **Capital**. New York: Vintage, 1990. V. 1. p. 376.

The process of abstraction, violent in its intent and impact, nevertheless cannot escape material consequences. This is exemplified in Escobar's study of Colombia's Tumaco region, where the co-existence of industrial shrimp farming and biofuel production generate 'capital's second contradiction.' Here, 'the capitalization of nature in the shrimp and oil palm sectors creates a contradiction between these two types of capital (the growing contamination of the rivers by the *palmicultoras* influences negatively the shrimp sector, for instance). There are thus contradictions between individual capitals and capital as a whole'.⁴³ In other words, in degrading its ecological base, capital simultaneously undermines its long-term sustainability. In this sense economic and ecological relations are mutually conditioning – and paradoxically. In other words, this ontological encounter, which takes particular form in this place, is the 'self-forming whole' that defines the current conjuncture – one of ecological degradation informing capital's crisis.

The encounter between such distinct and seemingly irreconcilable ontologies is nonetheless a historical relationship. Their trajectories, therefore, can be understood and evaluated comparatively, because their existence is mutually conditioning (despite their distinct organizing principles). Their mutual relations may in fact determine the viability of each, both as particular expressions of the implications of such an encounter, and as contradictory parts of a larger totality, comprising environmental and political relations.

This totality is increasingly expressed in terms of the 'ecological footprint,' generating forms of ecological accounting to compensate for the aridity of the economic calculus. Here, authorities ascribe a monetary value to natural resources, encouraging the institutionalization of 'payment for environmental services,' as way of internalizing 'externalities.' Martinez-Alier observes of this practice that 'while conventional economics looks at environmental impacts in terms of externalities which should be internalized into the price system, one can see

⁴³ ESCOBAR, Arturo. **Territories of Difference. Place, movements, life, redes.** Durham & London: Duke University, 2008. p. 94.

externalities not as market failures but as cost-shifting successes *which nevertheless might give rise to environmental movements*'.⁴⁴

In other words, there is a politics involved in such accounting practices, revealed and/or countered by 'the environmentalism of the poor.' Interestingly, 'until recently, the actors of such conflicts rarely saw themselves as environmentalists. Their concern is with livelihood. The environmentalism of the poor is often expressed in the language of legally established old community property rights'.⁴⁵ In this sense the notion of an ecological calculus is very much a social construction. And it extends to not simply making clear that environments are also human habitats, but also showing that, *pace* eco-feminist economists, 'national income accounting, even the destruction of natural resources is counted as production, while environmental and social reproduction is not'.⁴⁶ Thus, through numerous such encounters, social theory is confronted with its blind-spot vis-à-vis ecological relations.

Ontological encounter

As shown, the 'epistemic override' in value relations clearly implicates the alternative ontology associated with an ecological calculus, embodying a comparative relation by definition. But there is an asymmetry here, underscoring the historicity of this ontological encounter, represented by an economic calculus as the modern rationality of the development episteme. Whereas 'ecological' practices organize around replenishment, 'economic' practices organize for 'robbery' – at the expense of the former practices. While the former respects biological time, the latter concerns itself solely with value's velocity of circulation. One consequence is to deem ecological (rather than economic) practices anachronistic and change-resistant.

Such discounting is routine with respect to understanding forms of peasant social reproduction. In consequence, as van der Ploeg claims: 'peasant-like ways of farming often exist as *practices without theoretical representation*.... Hence they

⁴⁴ MARTINEZ-ALIER, Joan. Op. Cit., p. 257, emphasis added.

⁴⁵ Ibidem. p. 266.

⁴⁶ Ibidem. p. 211.

cannot be properly understood, which normally fuels the conclusion that they do not exist or that they are, at best, some irrelevant anomaly'.⁴⁷ Small-holder farming, whether or not it embodies an 'ecological calculus,' is routinely assumed to represent an initial developmental stage, an historical relic in the twenty-first century. Marx's observation of peasant proprietorship echoes a modernist representation of agriculture through the capital lens:

Proprietorship of land parcels by its very nature excludes the development of social productive forces of labour, social forms of labour, social concentration of capital, large-scale cattle-raising, and the progressive application of science.⁴⁸

In other words, this representation of small-holding 'excludes' attention to 'the very nature' of labor-intensive farming, because of the priority of value relations in Marx's reconstruction of capital's logical relations. However, as argued, Marx's value theory is methodological. Value is not *intrinsic* to labor, or nature, rather it is produced through social combinations of labor/nature as commodities with exchange-value. Capital's language of valuation is monetary value alone, but critical value theory demystifies this alienated language, opening up alternative possibility. What appears to be a universal rationality, and represented as such, is in fact an abstraction and form of denial of practical value. In other words, value theory implies (but cannot itself define) alternative relationships embodying distinctive forms and understandings of value – such as the 'peasant-like ways of farming' referred to by van der Ploeg. This is, in effect, an ontological standoff.

However, alternatives emerge relationally. For example, the international peasant coalition, which contests the industrialization of agriculture on a world scale, comprises a mobilization of smallholders, region by region, under the strategic (globalized) slogan of 'food sovereignty.'⁴⁹ Contrary to the dominant

⁴⁷ VAN DER PLOEG, Jan Douwe. **The New Peasantries**. Struggles for Autonomy and Sustainability in an Era of Empire and Globalization. London: Earthscan, 2009. p. 19, italics added.

⁴⁸ MARX, 1967, p. 807.

⁴⁹ Food sovereignty is counterposed to 'food security' – a term appropriated by the neoliberal project of establishing a corporate food regime responsible for 'feeding the world' through the market. Since that has not eventuated, the food sovereignty movement politicizes this condition by advocating an alternative politics of food based on citizen rights to organize their own

economic calculus viewing agriculture as necessary to the reproduction of capital (raw materials, foodstuffs, fuels, dispossessed labor), the food sovereignty movement regards agriculture as necessary to social and ecological reproduction. Historically, 'food sovereignty' emerged in relation to the depredations of neoliberalism, and in particular its appropriation of the concept of 'food security' to mean food provisioning through the global market via protected food corporations.⁵⁰ As founding member of La Vía Campesina (largest peasant coalition within the International Planning Committee for Food Sovereignty), Paul Nicholson, observed:

the farmers' organizations from Latin America and Europe that were going to found Vía Campesina in 1993 met in Managua in 1992. At that time, we issued a 'Managua declaration' where we denounced the 'agrarian crisis' and 'rural poverty and hunger' resulting from the neo-liberal policies. This crisis is the very reason why Vía Campesina was created.⁵¹

And this agrarian crisis unfolded fifteen years later as the 2007-08 'food crisis' – which, for Vía Campesina, began:

a new stage for us because since then we have focused much more on developing and promoting alternatives. The frontal opposition to the neo-liberal model is still there, but we feel a strong unity between all our members in the model of production and the society that we promote. For example, we have started working much more systematically on the defence of biodiversity and farmers seeds. The Vía Campesina reaction to the climate and then to the food crisis has been 'small farmers cool down the earth' and 'we can feed the world'.⁵²

While these claims are visionary, nevertheless they offer an alternative ecological rationality. Thus João Pedro Stedile, a leader of the MST (of Vía Campesina), observes:

national/local food systems (ROSSET, Peter. Food Sovereignty and the Contemporary Food Crisis. **Development**, v. 51, n. 4, p. 460-463, 2008.).

⁵⁰ MCMICHAEL, Philip. Peasant prospects in a neoliberal age. **New Political Economy**, v. 11, n. 3, p. 407-18, 2006.

⁵¹ NICHOLSON, Paul. Vía Campesina: responding to systemic crisis. **Development**, v. 51, n. 4, p. 456-459, 2008. p. 456.

⁵² Ibidem. p. 457.

From the time of Zapata in Mexico, or of Julio in Brazil, the inspiration for agrarian reform was the idea that the land belonged to those who worked it. Today we need to go beyond this. It's not enough to argue that if you work the land, you have proprietary rights over it.... We want an agrarian practice that transforms farmers into guardians of the land, and a different way of farming that ensures an ecological equilibrium and also guarantees that land is not seen as private property.⁵³

The ontology expressed here is not only about stewardship of the land as a social act, but also as actively sustaining eco-systems. It depends on a foundational practice perhaps expressed best by the head of a Mixtex organization known as CEDICAM (Mexico), in characterizing *milpa* agriculture thus: 'It's not a way of improving nature – it's a way of getting closer to the processes of nature, getting as close as possible to what nature does'.⁵⁴

Van der Ploeg's research⁵⁵ illustrates the substantive ecological calculus within contemporary peasant agricultural practices. It exemplifies an ongoing ontological encounter that is defining of this historical conjuncture, where the crisis of industrial agriculture is expressed in a process of re-peasantization – which, through a modernist lens, but for ecological necessity, would be considered 'unthinkable'.⁵⁶ That is, van der Ploeg specifies 'the peasant condition' as entirely contemporary and global, as distinct from a historicist definition of the peasantry as belonging to the past and/or the periphery.⁵⁷ This condition stems from the crisis of industrial agriculture (organized by a complex of 'food empires'). The peasant condition is centered in practices of co-production with living nature, including patterns of cooperation, that 'aims at and materializes as *the creation and development of a self-controlled and self-managed resource base*,' which may be strengthened by engaging in pluriactivity/other non-agrarian activities'.⁵⁸ A

⁵³ STEDILE, João Pedro. Landless battalions. **New Left Review**, v. 15, p. 77-104, 2002. p. 100.

⁵⁴ Quoted in CANBY, Peter. Retreat to subsistence. **The Nation**, July 5, p. 30-36, 2010. p. 36.

⁵⁵ This involves over a decade of comparative research in Peru, Italy and the Netherlands.

⁵⁶ Trouillot argues that the Haitian slave revolt, in upending Enlightenment discourse that disconnected the category of 'slave' from self-organization, revealed the 'unthinkable even as it happened' (TROUILLOT, Michel-Rolph. **Silencing the past**. Power and the production of history. Boston: Beacon Press, 1995. p. 72).

⁵⁷ VAN DER PLOEG, Jan Douwe. **The New Peasantries...** Op. Cit., p. 34.

⁵⁸ Cf: VAN DER PLOEG, Jan Douwe. **The New Peasantries...** Op. Cit., p. 23, 33.

This definition allows for engagement with commodity circuits (without necessarily transforming peasants into 'petty commodity producers'), and for peasant 'opportunism:' 'whether and to what

fundamental part of this conceptualization is that whereas peasant agriculture is portrayed as stagnant via a market lens, in fact reproduction and development of the resource base is *both* definitive of the peasantry *and* the condition of its emancipation from an economic calculus – as proscribed by my notion of the ‘ontological encounter.’

In suggesting that ‘European peasants are far more peasant than many farmers in the developing world and this explains why they are somewhat better off’⁵⁹ van der Ploeg universalizes the peasant condition (contrary to conventional consignment of peasantries to the margins of an advancing capitalist frontier in the global South). That is, the modern peasant inhabits a specific temporality, that of the global agrarian crisis of the neoliberal project:

Worldwide, peasants face dependency and deprivation and the implied danger of further marginalization... [they face] threats implied by the squeeze on agriculture (i.e. stagnating output prices and increasing costs). They likewise suffer from a range of old and new dependency relations, among them the newly emerging regulatory schemes that prescribe the most miniscule details of the labour and production process.⁶⁰

Starting from the observation that ‘peasants, wherever located, related to nature in ways that sharply differ from the relations entailed in other modes of farming’,⁶¹ van der Ploeg goes on to argue that their response to this encounter is to ‘repeasantize,’ in a double movement: quantitatively, as entrepreneurial farmers re-convert into peasants, joined by those returning to the land, and qualitatively, as

extent peasants produce commodities that routinely enter capitalist circuits, and whether and to what extent peasants perceive themselves as utilizing, rather than internalizing, commodity production to sustain their households and communities’ (MCMICHAEL, Philip. Peasant prospects in a neoliberal age... Op. Cit., p. 411). Claiming peasants constantly adapt to changing circumstances, van der Ploeg (VAN DER PLOEG, Jan Douwe. **The New Peasantries... Op. Cit.**, p. 30) avoids ‘identifying or limiting the concept of survival (and for that matter, the concept of the peasantry more generally) to that of ‘subsistence’ (or self-provisioning of food).’

⁵⁹ Cf: VAN DER PLOEG, Jan Douwe. **The New Peasantries... Op. Cit.**, p. 40.

In fact, van der Ploeg cites comparative research in seven European countries indicating that 60% of professional farmers cut costs through self-provisioning (VAN DER PLOEG, Jan Douwe. **The Peasantries of the twenty-first century: the commoditization debate revisited. The Journal of Peasant Studies**, v. 37, n. 1, p. 1-30, 2010. p. 7).

⁶⁰ VAN DER PLOEG, Jan Douwe. **The New Peasantries... Op. Cit.**, p. 39.

⁶¹ Ibidem. p. 21.

peasants embrace forms of distancing from markets via internalization of an ecological calculus.

The peasant mode animates given resources (ie, those produced and reproduced through previous production cycles) with labor-driven intensification, enhanced by forms of reciprocity as (network) resources to be mobilized in enhancing 'value-adding.' Conventional value-adding (via non-agricultural income, such as agro-tourism, nature management) complements the 'value-adding' associated with enhancing self-provisioning (production inputs as well as subsistence) -- an apparent paradox resolved as follows: 'the more the farm is distanced from the large upstream markets (and the imperial control rooted in them) the larger the room for manoeuvre to construct the new alternatives on the downstream side'.⁶²

Despite this awkward juxtaposition of different forms of 'value-adding,' van der Ploeg claims that peasant farming is distinct from other forms of agriculture, such that modernist categories are unable to comprehend, or theoretically represent, the specificity of contemporary peasantries. This distinction concerns the centrality of labor -- materially, as well as epistemically. Capitalist operations, *tout court*, are governed by the drive to *replace* labor in production. Accordingly, (peasant) labor is viewed as, and rendered, redundant. For van der Ploeg, labor intensification is the *differentia specifica* of the peasant mode of farming. His discussion of labor intensification offers a fundamental critique of developmentalist portrayals of peasant labor as both outmoded and constrained by paucity of resources (defined in physical, rather than biophysical, terms).⁶³ From a developmentalist perspective limited landholdings, non-improved varieties, and traditional knowledge all contribute to a subsistence level of farming that is 'unable to drive development'.⁶⁴

⁶² VAN DER PLOEG, Jan Douwe. The peasantries of the twenty-first century:... Op. Cit., p. 20.

⁶³ There are echoes here of the 'natural' path of development (labor-intensive methods) identified by Arrighi as originating conceptually in Adam Smith's work, and informing the 'East Asian model' (ARRIGHI, Giovanni. Adam Smith in Beijing. Lineages of the Twenty-First Century. London: Verso, 2007.) -- as distinct from the 'unnatural' capitalist path pursued by the West -- a potential 'ontological dualism'?

⁶⁴ VAN DER PLOEG, Jan Douwe. **The New Peasantries**... Op. Cit., p. 46.

Specifying the peasant mode historically insists that 'labor-driven intensification emerges as a strategic, if not unavoidable, development trajectory'.⁶⁵ For within a predatory neoliberal market environment constituted by a complex of 'food empires:'

A non-commoditised exchange with nature allows the building of an important line of defence: the more that farming is grounded on ecological capital the lower the monetary costs of production will be. Ecological capital, if cared for, also allows for patterns of growth that are independent of the main markets for factors of production and non-factor inputs: herds are enlarged and improved through on-farm breeding and selection; fields are well-cultivated and made more fertile; new experiences are translated into expanded knowledge.⁶⁶

The concept of 'ecological capital' invokes value-adding as central to the peasant mode. Paradoxically, value here means ultimately a *reduction* of monetized inputs, insofar as farm resources are reclaimed as use- rather than exchange-values, via the decommodification of farming. What appears as a negative balance in the monetary equation, is, in fact, emancipatory. More than simply use-value, what is accumulated is not exchange-value but *reproductive value* of agricultural resources rather than of capital. Building 'ecological capital' represents an alternative form of valorization -- an ecological calculus, versus an economic calculus. And it involves multiple practices, 'institutionalized within vested routines and a range of cultural *repertoires* that stress the virtues of autonomy, freedom, work and progress obtained through the co-production of man and nature'.⁶⁷

Van der Ploeg's use of terms such as 'value-adding' and 'ecological capital' underlines the fluidity and overlap among agricultures, allowing some mutation (or even mutual conditioning) between peasant and entrepreneurial farming. The more substantial the 'ecological capital,' where peasant households are in a position to mobilize resources off and on the farm and stabilize their material base, the greater the emancipatory possibilities and the socio-political impact of the

⁶⁵ Ibidem. p. 48.

⁶⁶ VAN DER PLOEG, Jan Douwe. The peasantries of the twenty-first century... Op. Cit., p. 4-5.

⁶⁷ VAN DER PLOEG, Jan Douwe. **The New Peasantries**... Op. Cit., p. 49.

peasant mode of farming – with developmental consequences. In Europe at least, to the extent that peasant farming:

easily unfolds as multifunctional agriculture... entrepreneurial farming will find it far more difficult to do so... there will be an overarching need to create high employment and adequate remuneration levels in these new rural areas of the enlarged European Union. This definitively requires a reconceptualization of farming that goes beyond entrepreneurial and corporate models that tend to reduce employment levels and value added. *Repeasantization will occur as a material need* (if it is not already one).⁶⁸

In other words, an ecological calculus addresses and moves to resolve the socio-ecological contradictions (displacement, labor redundancy, debt, environmental degradation) generated by the economic calculus.

Incorporating comparison

This is, therefore, an argument for recognition of what would normally be ‘unthinkable’ within the economic rationalist terms of neoliberal modernity. At first glance these two forms of calculus appear to be ideal types, compositionally distinct. More than ideal types, they represent distinct ontologies insofar as they are historically produced and enacted. But they are also, in some sense, mutually complicit, and as such, comparable. The form of complicity is historical. That is, while the economic calculus is a product of capitalist modernity and its power relations, an ecological calculus is rooted in long-standing practices, the knowledge of which has been progressively erased with the advance of the economic calculus.⁶⁹ And yet, evidently these particular ontologies are neither independent of one another nor of time-space relations. They may not be historically equivalent,

⁶⁸ Ibidem. p. 285. Italics added.

⁶⁹ Note that Latour views ‘being modern’ as constructing separate ‘ontological zones’ by ‘purification’ of humans from non-human entities – as distinct from the hybridity of the Achuar of Amazonia, who ‘do not... share this antinomy between two closed and irremediably opposed worlds: the cultural world of human society and the natural world of animal society’ (Descola quoted in Latour 1993, 14). Nonetheless, anthropologist Descola goes on to observe ‘and yet there is nevertheless a certain point at which the continuum of sociability breaks down, yielding to a wild world inexorably foreign to humans’ (idem). This of course is a boundary issue, and does not alter the basic point regarding socio-natural hybridity, but what it does underline is that nature has its own ‘laws,’ even when entangled with social relations – as is clearly evident in the (feedback) effects associated with climate change (Cf: MCMICHAEL, Philip. In the short run are we all dead? A political ecology of the development climate. In: LEE, Richard (Ed.) **The Longue Durée and World-Systems Analysis**. Albany: Suny, 2012.).

but they are mutually implicating. Establishing this, and its conjunctural-historical impact, is the task of incorporated comparison.

The shrimp-farming instance is a case in point, revealing the asymmetry of the relationship whereby the former (economic) subordinates the latter (ecological) in exercising its power as a universal. Nevertheless, it is also the case that the materiality of these ontologies is asserted in feedback mechanisms expressing the (hitherto) 'externalized' ecological conditions of commodity production. The examples here demonstrate that feedback mechanisms can take the form of environmental degradation undermining conditions of accumulation, or they can take the form of rising costs of production transmitted through farmer dependency on food empires for (commodified, and fossil-fuel based) inputs. What may have been unthinkable in the terms of the economic calculus feeds back as pollution, indebtedness (and suicide), or political resistance – such as the environmentalism of the poor or food sovereignty movements.

Such 'feedback' in fact registers the false separation (and, indeed, economy), of modernity. Latour captures this falsity in his notion of the constitution - 'the common text that defines this understanding and this separation',⁷⁰ observing:

the Constitution provided the moderns with the daring to mobilize things and people on a scale that they would otherwise have disallowed. This modification of scale was achieved not – as they thought – by the separation of humans and nonhumans but on the contrary, by the amplification of their contacts.⁷¹

But from such duplicity, de la Candena draws emancipatory possibility -- by imagining:

a pluriverse as partially connected heterogeneous socionatural worlds negotiating their ontological disagreements politically... The idea of a pluriverse is utopian indeed: not because other socionatural formations and their earth-practices do not take place, but because we have learned to ignore their occurrence, considering it a thing of the past or, what is the same, a matter of ignorance and superstition.... The utopian process is, thus, the redefinition of the baseline of the political, from one where politics started with a hegemonic definition that housed the superiority of the socionatural formation of the West and its practices, to one that starts with a symmetric understanding of

⁷⁰ LATOUR, Bruno. Op. Cit., p. 14.

⁷¹ Ibidem. p. 41.

plural worlds, their socionatural formations and their practices. From the prior baseline (or, rather, the one we are used to) politics appeared as an affair among humans after denying the ontological copresence of other socionatural formations and its practices and translating the denial, with the use of universal history, from an antagonistic maneuver—a declaration of war against worlds deemed inferior—into a necessary condition for one good, livable world order.⁷²

I have used the example of ‘repeasantization’ here to exemplify socionatural plurality. As such it represents a distinctive ecological principle realized through the contradictions and limits of the economic calculus. In this sense it is part of ‘the self-forming whole’ underway at this historical moment – as revealed by the method of incorporated comparison. To reiterate, ‘distanciation’ represents a solution to the agrarian crisis – a solution that requires ‘retreat’ into, and embrace of, an ecological calculus. Instead of internalizing costs, via market environmentalism, in recognition of the ecological violence of commodity production, farmers internalize value, as ‘ecological capital’ (van der Ploeg’s [hybrid] term). Rather than extracting monetized value through exploitation of labor and nature, modern peasants replenish soil and water nutrient cycles as ecological values upon which human survival depends. In this regard, ‘farming is again being understood, and practised, as co-production: the interaction and mutual transformation of human actors and living nature. Farming is not only based on “economic exchanges,” but also on “ecological exchange”⁷³ In other words, while ‘repeasantization’ prioritizes the ecological, inverting *neoliberal* modernity, it is not independent of the economic, which is now secondary or subordinate.

The point of this exercise has been to demonstrate the comparative substance embedded in seemingly disparate, and yet ultimately interdependent, ontologies. How they manifest in distinctive instances expresses differential space-time relations within and between them. They are not immutable ways of being so much as historical expressions of ‘world ordering,’ and as such are not only comparable but their ‘histories’ are only understandable through their relation to one another – histories that through encounter progressively (perhaps) reorder

⁷² DE LA CADENA, Marisol. Op. Cit., p. 360-361.

⁷³ VAN DER PLOEG, Jan Douwe. The peasantries of the twenty-first century... Op. Cit., p. 4.

the world. This is the first criterion of incorporated comparison. The second is that through these encounters we gain a more complex understanding of the tensions and possibilities of the current historical conjuncture.

References

- ARRIGHI, Giovanni. **The Long Twentieth Century**. London: Verso, 1994.
- _____. Adam Smith in Beijing. Lineages of the Twenty-First Century. London: Verso, 2007.
- ARRIGHI, Giovanni; SILVER, Beverly. Chaos and Governance in the Modern World-System. Minneapolis: University of Minnesota, 1999.
- CANBY, Peter. Retreat to subsistence. **The Nation**, July 5, p. 30-36, 2010.
- CONNELL, R.W. Why is Classical Theory Classical? **American Journal of Sociology**, v. 102, n. 6, p. 1511-1557, 1997.
- DA COSTA, Dia; Philip MCMICHAEL. The poverty of the global order. **Globalizations**, v. 4, n. 4, p. 593-607, 2007.
- DE LA CADENA, Marisol. Indigenous cosmopolitics in the Andes. Conceptual reflections beyond “politics”. **Cultural Anthropology**, v. 25, n. 2, p. 334-370, 2010.
- DUNCAN, Colin. ‘The practical equivalent of war? Or, using rapid massive climate, change to ease the great transition towards a new sustainable anthropocentrism.’ 2007.
- ESCOBAR, Arturo. **Territories of Difference. Place, movements, life, redes**. Durham & London: Duke University, 2008.
- FERGUSON, James; GUPTA, Akhil. Spatializing states: Towards an ethnography of neoliberal governmentality. **American Ethnologist**, v. 2, n. 4, p. 981-1002, 2002.
- FOSTER, J.B. **Marx’s ecology: materialism and nature**. New York: Monthly Review, 2000.
- GIBSON-GRAHAM, J.K. **A Post-Capitalist Politics**. Minneapolis: University of Minnesota, 2006.
- HALPERIN, Sandra. **Re-envisioning Global Development: A Horizontal Perspective**. Abingdon: Routledge, 2013.

HART, Gillian. Denaturalizing dispossession: critical ethnography in the age of resurgent imperialism. **Centre for Civil Society Research Reports**, v. 1, n. 27, p. 1-25, 2005.

HOPKINS, Terence K. World-system analysis: methodological issues.' *In*: KAPLAN, B.H. (Ed). **Social Change in the Capitalist World-Economy**. Beverly Hills: Sage, 1978, p. 199-218.

LATOUR, Bruno. **We have never been Modern**. Cambridge: Harvard University, 1993.

MARTINEZ-ALIER, Joan. **The Environmentalism of the Poor**. A study of ecological conflicts and valuation. Cheltenham: Edward Elgar, 2002.

MARX, Karl. **Grundrisse**. New York: Vintage, 1973.

__. **Capital**. New York: International Publishers, 1974. V. 3.

__. **Capital**. New York: Vintage, 1990. V. 1.

MCMICHAEL, Philip. Incorporating comparison within a world-historical perspective: an alternative comparative method. **American Sociological Review**, v. 55, p. 385-397, 1990.

__. Rethinking comparative analysis in a post-developmental context. **International Social Science Journal**, v. 133, p. 351-365, 1992.

__. World-systems analysis, globalization and incorporated comparison. **Journal of World-System Research**, v. VI, n. 3, p. 68-99, 2000.

__. Revisiting the question of the transnational state. **Theory & Society**, v. 30, n. 2, p. 201-210, 2001.

__. Peasant prospects in a neoliberal age. **New Political Economy**, v. 11, n. 3, p. 407-18, 2006.

__. In the short run are we all dead? A political ecology of the development climate. *In*: LEE, Richard (Ed.) **The Longue Dureé and World-Systems Analysis**. Albany: Suny, 2012.

__. **Development and Social Change: A Global Perspective**. Thousand Oaks: Sage, 2016. 6th edition.

MITCHELL, Timothy (Ed.). **Questions of Modernity**. Minneapolis: U of Minnesota, 2000.

MONGIA, Radhika. Historicizing state sovereignty: Inequality and the form of equivalence. **Comparative Studies in Society and History**, v. 49, n. 2, p. 384-411, 2007.

MOORE, Jason. Environmental crises and the metabolic rift in world-historical perspective. **Organization & Environment**, v. 13, n. 2, p. 123-57, 2000.

—. The modern world-system as environmental history? Ecology and the rise of capitalism. **Theory and Society**, v. 32, p. 307-377, 2003.

NICHOLSON, Paul. Vía Campesina: responding to systemic crisis. **Development**, v. 51, n. 4, p. 456-459, 2008.

PATEL, Raj; MOORE, W. **A History of the World in Seven Cheap Things**. Oakland: University of California, 2017.

POLANYI, Karl. **The Great Transformation**. Boston: Beacon, 1957 (1944).

ROSSET, Peter. Food Sovereignty and the Contemporary Food Crisis. **Development**, v. 51, n. 4, p. 460-463, 2008.

SCHNEIDER, Mindi; MCMICHAEL, Philip. Deepening, and repairing, the metabolic rift. **The Journal of Peasant Studies**, v. 37, n. 3, p. 461-484, 2010.

STEDILE, João Pedro. Landless battalions. **New Left Review**, v. 15, p. 77-104, 2002.

TOMICH, Dale. **Through the Prism of Slavery**. Lanham, MD: Rowman & Littlefield, 2004.

TROUILLOT, Michel-Rolph. **Silencing the past. Power and the production of history**. Boston: Beacon Press, 1995.

TSING, Anna Lowenhaupt. **Friction**. An Ethnography of Global Connection. Princeton: Princeton University, 2005.

VAN DER PLOEG, Jan Douwe. **The New Peasantries**. Struggles for Autonomy and Sustainability in an Era of Empire and Globalization. London: Earthscan, 2009.

—. The peasantries of the twenty-first century: the commoditization debate revisited. **The Journal of Peasant Studies**, v. 37, n. 1, p. 1-30, 2010.

WALLERSTEIN, Immanuel. **The Modern World-System**. New York: Academic Press, 1974.

ENDEREÇO PARA CORRESPONDÊNCIA:

Philip McMichael

Cornell Cals – Department of Developed Sociology

250A Warren Hall

Recebido: 30/05/2019

Aprovado: 07/06/2019