Capitalism, Time-Space, Environment, and Human Well-Being: Envisioning Ecosocialist Temporality and Spatiality

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Speeding Up The World

Contemporary society has been characterized as "accelerated." The acceleration or speeding up of everyday life is seen as a central temporal feature of "modernity,"[1] or depending on one's theoretical bias, of contemporary "turbo" capitalism.[2] The commodification of time and the compression of time and space is a "motor" of acceleration.[3] The macro-social context of global capitalism influences both the level of everyday existence and the quality of life. One important feature of capitalism is its drive to increase the intensity and scale of accumulation, which leads to the acceleration of time in everyday life. This acceleration maximizes both production and consumption in an ecologically unsustainable and individually unhealthy fashion.[4] According to Kovel: "… *the speeding up of buying and selling,* [leads] *to the reduced utilization time of commodities or, to put a more ecologically evocative term to it, the systemic production of waste, that is, the throw-away society*."[5]

Critics of globalization and global capitalism argue that the time-space compression under capitalism not only exhausts resources (e.g., energy and land) faster than they can be replaced, it does not allow enough time for mind-bodies to be "regenerated." According to Brennan:

> Just as nature took time to regenerate, so did her stewards, even if the idleness was enforced. At the outset, we supposed that, like nature, human beings have biological rhythms which require a certain down time. When the rate of production is constrained by natural rhythms, human beings are enabled to rest and recreate.[6]

Of course humans can be socially constituted to adapt to the demands of capitalist temporality (e.g., shift work), just as nature (e.g., land) can be adapted to the rhythms of capitalist industrial agriculture. However, such adaptations have long-range "unhealthy" costs and require compensatory mechanisms to deal with temporal-spatial contradictions, such as disturbed sleep patterns to cope with a lack of sleep or using oil-based artificial fertilizer to boost depleted soil.

Capitalism has saturated time-space, colonizing it. The speeding up of daily life is paralleled by the acceleration of the degradation and appropriation of the environment. The commodification

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[1] Hartmut Rosa, "Social Acceleration: Ethical and Political Consequences of a Desynchronized High-Speed Society," *Constellations: An International Journal of Critical and Democratic Theory*, Vol. 10, No. 1, March 2003, pp. 3-41.
[2] Carl Honoré, *In Praise of Slowness* (San Francisco: Harper Collins, 2004).
[3] Barbara Adam, "Comment on *Social Acceleration* by Hartmut Rosa," *Constellations: An International Journal of Critical and Democratic Theory*, Vol. 10, No. 1, 2003, pp. 49-52.
[4] Teresa Brennan, *Globalization and Its Terrors: Daily Life in the West* (London: Routledge, 2003).
[5] Joel Kovel, *The Enemy of Nature: The End of Capitalism or the End of the World* (London: Zed Books, 2002), p. 61, italics in original.
[6] Teresa Brennan, *Globalization and Its Terrors*, p. 151.

of nature has accelerated along with the privatization of the commons. With the spread of global capitalism, the scale and speed of such appropriation and degradation have increased. Thus as China is integrated into the global capitalist economy, it will increasingly be under pressure to accelerate the production of export products, in turn, exacerbating deforestation, soil erosion, and water shortages.[7]

Global capitalism is driving widening "metabolic-biospheric rifts" in the commons (space). These include temporal rifts between energy and resource consumption and their renewability, as well as rifts between the rate of waste production and the capacity of ecosystems to cope with it.[8] Thus carbon and other emissions tend to be created at a "rate faster than natural systems can absorb them, contributing to the creation of a global ecological crisis."[9] There are also spatial rifts, such as the increasing separations of natural habitats. Spatial rifts are expressed in city/rural and North/South splits, and within built environments as "antimonies between nature and culture, divisions into "residential," "commercial," "light industrial," "historic preservation," and "natural restoration" spaces.[10] Temporal-spatial rifts produce what James O'Connor has called the "second contradiction" of capitalism—a contradiction between the capitalist mode of production and the conditions of production, or more generally, the "conditions of existence."[11]

Fast Cars—Fast Food

Auto-centered transport systems and industrialized capitalist food systems of hyper production and consumption clearly illustrate temporal-spatial rifts and contradictions. Of course the automobile (and airplanes) are here to stay. While the automobile offers significant advantages in personal convenience, auto-centered transport systems obscure the fact that not all trips require these advantages. An enormous amount of fossil fuel is used by solitary drivers engaged in single journeys. The current intensity of use translates into at least one car per adult in the U.S., and the number of miles traveled in all cars continues to grow. This enhanced scale impacts society in ways that technical improvements such as enhanced fuel efficiency cannot redress. Even if engineers were to produce a clean and recyclable form of the car (a possibility that may not be far off), the number of cars and their rising use would continue to consume large and ultimately unsustainable amounts of land space. "The typical vehicle weighs 20 times more than the person transported and has a spatial footprint at least 100 times greater and sits idle 95 percent of the time."[12]

Because of their ever-increasing requirements for space, even nearly perfect green automobiles are merely a technological fix and not the systemic solution that is needed to bring about real ecological sustainability in transportation. Green cars could considerably reduce the contribution of transport to global warming, air pollution, and the consumption of natural resources, all serious problems. However, only addressing tailpipe emissions or even the environmental destruction that results from manufacturing cars leaves out a central problem: the individuality of its

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[7] Mike Davis, *Dead Cities: And Other Tales* (New York: The New Press, 2002), p. 402.
[8] Brett Clark and Richard York, "Carbon Metabolism: Global Capitalism, Climate Change and the Biospheric Rift," *Theory and Society*, 34, 2005, pp. 391-428.
[9] *Ibid.*, p. 392.
[10] James O'Connor (ed.), *Natural Causes: Essays in Ecological Marxism* (New York: The Guildford Press, 1998), p. 79.
[11] *Ibid.*
[12] Daniel Sperling, Deborah Gordon, and Arnold Schwarzenegger, *Two Billion Cars: Driving Towards Sustainability* (New York: Oxford University Press, 2009).

use combined with built environments to encourage and even mandate that individual use. Thus, Los Angeles, to cite a paradigmatic case, is decentralized with radically dispersed activity sites; the City of Angels is also extremely auto-dependent.[13] The way forward to a socially (and materially) sustainable form of daily transport is to *reduce* auto use by sole individuals, and to do so through the construction of built environments that provide multiple and interconnected modes of transport. Time, the social organization of space, and scale geographical features of spaces are all factors in determining the appropriateness of a movement technology and must be taken into account in creating truly sustainable transport systems.

Problems of time, scale, intensive resource and energy consumption, and environmental degradation also characterize global, large-scale industrial agriculture—such as fast food production and consumption systems. "Fast food" and "fast car" systems, in other words, are not very sustainable in the long run, and both contribute to current environmental problems. Both are growing global monocultures that are eroding diversity—including biodiversity. Both systems are driven by the needs of capitalist accumulation as opposed to by social and local needs. From an environmental perspective, both systems have the illusion of being efficient, but in terms of the efficient use of energy resources, such technological systems are, to use Sachs' characterization of auto-mobility, as efficient as "using a chainsaw to cut butter,"[14] Barry Commoner's observation about using nuclear power to heat water is also apropos here: it is as efficient as using a cannonball to ring a doorbell.[15] Food miles and driving a mile in an SUV to rent a DVD are expressions of such inefficiencies. As Patel says, in the U.K. a "quarter of all trucks on U.K. roads are carrying food, and the average British family drives 136 miles a year to buy it."[16] Contemporary food systems require as much energy for people to procure the food as it takes to produce it. Indeed, it has been said that "modern agriculture has become the art of turning oil into food."[17]

The growing production of biofuels, which use arable land to grow food as oil for the bottomless appetites of individualized automobile consumption, impacts food prices and land use. Biofuel production is energy and resource intensive, and like "regular" oil has a negative impact on human and environmental well-being. Thus, it is estimated that "two full tanks of fuel for an SUV will use the grain that could supply the calories needed by sixteen people for a year, if directly used as food.[18] Patel argues that where "we live and work shapes *what* and *how* we eat and drink. We need to better understand who controls space, and how this systematically shapes what we choose to eat, even in our homes, in the intimate places most directly under our control and influence."[19] The same might be said for transport spaces and places *and* the social organization of time in everyday life.

The Temporal Rhythms of Everyday

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[13] Mike Davis, *Dead Cities: And Other Tales*, p. 17.
[14] Wolfgang Sachs, *Die Liebe Zum Automobil* (Reinbeck bei Hamburg: Rohwolt, 1990).
[15] Barry Commoner, *Making Peace with the Planet* (New York: Pantheon Books, 1990).
[16] Raj Patel, *Stuffed and Starved: The Hidden Battle for the World Food System* (Brooklyn, NY: Melville House Publishing, 2008), pp. 295-296.
[17] Brett Clark and Richard York, "Carbon Metabolism," p. 399.
[18] Fred Magdoff, "The Political Economy and Ecology of Biofuels," *Monthly Review*, Vol. 60, No. 3, 2008, p. 39; Raj Patel, *Stuffed and Starved*, p. 266.
[19] Raj Patel, *ibid.*

The tendencies of capitalist temporality continue in an era of global capitalism in a qualitatively intensified—extensive fashion. On the plane of everyday life particularly in "rich" nations, time-space compression is a ubiquitous aspect of everyday life, binding time to intensified wage labor and consumption time. Overwork, over-consumption, and the "throwaway" society are some aspects of the environmentally and socially unhealthy tendencies of capitalist temporality. In the current era of global capitalism, these trends continue in a qualitatively different form and with greater intensity and scale.

Technological innovations such as the car and computer have catalyzed time-space compression,[20] a process that influences contemporary experience and subjectivity. Evidence shows that despite the availability of technologies that speed up productivity and movement through time/space, American people experience time scarcity and a "time squeeze."[21] This sense of a time squeeze is a response to ever-accelerating realities. The trend to multitasking is a contemporary expression of experienced time scarcity.[22] "The relentlessly increasing rate of capital turnover devolves into an even more harried, crowded, and frantic pace of existence."[23]

There is a "desynchronization" or "rift" between "natural" personal rhythms and work time (e.g., work time vs. free time) leading, according to Kovel, to a "disarticulation" (fragmentation/alienation) between humans and nature.[24] For instance, studies have tried, with mixed results, to establish links between long working hours and health. One study found that shorter workdays reduced the occurrence of musculoskeletal disorders (i.e., neck and shoulder pain). It has been argued that many of the problems may be the result of an "imbalance between strain and restitution."[25] "Time-outs" are important for both humans and nature.

Capitalism appropriates time and requires one's full participation in capitalism's division of labor and system of consumption, reducing the sphere of autonomy and one's ability to engage in relatively unalienated and sustainable "non-economic" and economic activities. Furthermore, as O'Connor points out, work time has not declined with increased productivity.[26] In fact, since the late 1970s, it has increased[27] at the expense of leisure, relaxation, and free time unbound by wage labor.

According to Marx, the working day must be shortened in order to move from the "realm of necessity" to the "realm of freedom."[28] Gorz also argued that work time—that is, *waged* labor—ultimately must be greatly reduced.[29] By decreasing time spent in the sphere of heteronomous work,

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[20] David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Oxford: Blackwell, 1989).
[21] Jerry A. Jacobs and Kathleen Gerson, *The Time Divide: Work, Family, and Gender Inequality* (Cambridge: Harvard University Press, 2004).
[22] Allen C. Bluedorn, *The Human Organization of Time: Temporal Realities and Experience* (Stanford: Stanford Business Books, 2002); Carl Honoré, *In Praise of Slowness*.
[23] Joel Kovel, *The Enemy of Nature*, p. 62.
[24] *Ibid.*, p. 60.
[25] E.L. Wergeland, B. Veiersted, M. Ingre, B. Olsson, T. Åkerstedt, T. Bjørnskau, and N. Varg, "A Shorter Workday as a Means of Reducing the Occurrence of Musculoskeletal Disorders," *Scandinavian Journal of Work and Environmental Health*, 29, 2003, p. 27.
[26] James O'Connor (ed.), *Natural Causes*, p. 311.
[27] Juliet B. Schor, "Work, Free Time and Consumption," *Time and Society*, Vol. 7, No. 1, 1998, pp. 119-127.
[28] T.B. Bottomore (transl.), *Karl Marx: Selected Writings in Sociology and Philosophy* (New York: McGraw Hill, 1956), pp. 254-255.
[29] André Gorz, *Paths to Paradise: On The Liberation From Work* (Boston: South End Press, 1985).

the sphere of autonomy can expand. The heteronomous sphere involves production that is beyond the control of individuals and is the result of the large-scale socialization of production with its complex and interdependent division of labor. Given highly developed forces of production, much less of this activity would be required to meet basic consumption needs in a socially and environmentally sustainable fashion.[30]

In such a context, time spent in freely chosen activity (including unpaid work) would be greatly expanded. Heteronomous work would be limited and temporally civilized. Here Marx's "communist" person would drive buses in the morning for a few months a year and be a poet, scholar, houseworker, etc. for the rest of the time. This would not simply be a decrease in work time but paid labor time. Work in the broadest sense, following Di Fazio, "comprises physical and intellectual activity, both paid and unpaid, and non-economic activity in which humans reproduce their relationship to nature and form themselves."[31]

By changing the social organization of time by considerably reducing working time needed for reproducing the collective socio-material life, a potential space is opened up for the imagination and craftsmanship, reducing overspecialization and potentially encouraging local production and consumption**.** Changes in the social organization of time, such as shortening wage labor, increasing the temporal space of autonomy, and the "slowing down" of everyday life (which may be "healthy" for humans and nature) requires a reconstitution of political, social, structural, and economic contexts in which such temporal issues are situated.

Slouching Towards Ecosocialism

At the risk of oversimplification, "traditional socialists" are still seen as productivist in contrast to Greens, who are seen as" anti-productivist." Most socialist visions of development are, like their capitalist counterparts, immersed in productivist assumptions that value greater efficiency. Ecological socialism bridges this divide by advocating a more efficient ecological productivism that reuses, recycles, and reduces energy and resource use. An ecosocialist version of productivism encompasses production that is oriented to use values that respect nature as an active partner and decommodify labor and land.[32] Such a reconstitution would problematize scale, "de-scale," and emphasize the local, as well as slow and stabilize temporalities. One could argue that one difference between ecosocialists and other socialists revolves around issues of time, space, scale, and nature, including socially constituted "second" nature. Ecological socialism, in contrast to traditional socialism, problematizes land use and upgrades issues of land and community and scale by emphasizing the local.[33] Thus ecosocialism stresses site specificity, the need to preserve biodiversity in place of the monocultures of capitalism.

Nature, rather than being viewed as a passive resource to be molded like clay, is understood as an active partner, following different rhythms and cycles than those of capital. This is not, as critics might suggest, an idealized or mystical view of nature, but one that allows nature to be its own intrinsically valuable entity, thus limiting the extent to which it can be socially constructed. Even

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[30] Murray Bookchin, *Post-Scarcity Anarchism* (Berkeley: Ramparts Press, 1971).
[31] William Di Fazio, *Ordinary Poverty: A Little Food and Cold Storage* (Philadelphia: Temple University Press, 2005), p. 183.
[32] James O'Connor (ed.), *Natural Causes*, p. 269.
[33] *Ibid*., pp. 336-337.

"second nature," while socially constituted, is still nature. Thus, as Clark and York argue, in order to mend rifts, what is needed is not simply technological fixes but an "entirely new social metabolism with nature"[34] or, as O'Connor suggests, a socialist "reconstruction of nature"—including human nature.[35] Though some versions of Marxism see nature as something to be dominated, Marx conceptualized the relationship as a metabolic one (an interchange, literally an exchange of materials). This metabolism between humans and nature is a fine balance, one increasingly threatened by the global capitalist organization of production.[36]

There are ecosocialist possibilities for reconstituting temporality (and space) in more sustainable ways in relationship to the forces of production and the conditions of production. One possibility, using contemporary science and technology, is the reconstitution of older technological forms that are not as resource and energy intensive and leave a smaller ecological footprint. For instance, contrary to the monocultural tendencies of auto-centered transport systems, the local and site specificity are important factors in what works as a transport technology and how the constructed environment should be built. Building sustainable transport technologies means looking beyond "green cars" and outside of the automobile "box" at older, less energy- and resource-intensive movement technologies (e.g., bicycles) and reconstituting them using "modern" technological knowledge and capacities. A movement technology in its broadest meaning includes bicycles, wheelchairs, and golf-cart-like vehicles, or "neighborhood" vehicles. Currently, heavy transport machinery is employed for short trips and other inappropriate uses with attendant environmental consequences. Focusing on developing transport technologies for individual or small group uses that leave smaller ecological footprints is a desirable goal. The viability of using and developing such technologies may depend on a "friendly" socialist context, which would develop infrastructures for their use in denser spatial organizations (e.g., cities). This would, in turn, decrease the distances between activity sites.

Cities have incredible, if largely underutilized, capacities for the efficient use of scarce natural resources. They also can provide affluent public spaces and activity sites that offer alternatives to energy- and resource-intensive, individualized and privatized modes of consumption, thus making possible high standards of living with a smaller ecological footprint.[37] As Magdoff suggests, there is a need for affluent societies to move away from ever-higher levels of consumption and a need to redesign economic activity, and most importantly, the social organization of space in a way that would reduce auto dependency.[38] Whether such changes are possible within the context of global capitalism is an open question, though capitalism's enormous appetite for energy and resources, its mandate to grow and expand, the use of the market to decide what is economically and socially possible, and its increasing commodification of the commons, make this unlikely.

Slow Movements, Smaller Scale

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[34] Brett Clark and Richard York, "Carbon Metabolism," p. 412.
[35] James O'Connor (ed.), *Natural Causes*, p. 129.
[36] Adrian Wilding, "Ideas for a Critical Theory of Nature," *Capitalism Nature Socialism*, Vol. 19, No. 4, December 2008, pp. 48-67.
[37] Mike Davis, *Dead Cities*, p. 101.
[38] Fred Magdoff, "The Political Economy and Ecology of Biofuels," *Monthly Review*, Vol. 60, No. 3, July-August 2008, p. 34.

In recent decades, movements challenging contemporary temporal rhythms have emerged, particularly in Europe. The slow movement, as Honoré points out, goes far beyond advocating the slow preparation, production, and consumption of food; it also challenges the "cult" of speed that developed with industrialization and has been intensified in recent decades.[39] Slow Food's critique is of global capitalism and its impact on the quality of life. It stresses sustainability and the importance of "relocalizing" production and consumption.[40] A critique of scale grounded in the analysis of people like E.F. Schumacher is also a part of the Slow Food perspective. These are also issues for ecosocialists. Reducing noise levels and traffic while increasing green spaces and pedestrianized "zones" are some of the goals of the "Città Slow" manifesto.[41] Rest is more than recovering from fatigue, and slow living is much more than moving at a slower place; it is about the quality of time in everyday life.[42] It is also a means of revitalization, an altered mode of being—one that respects the "non-social" aspects of mind-body.

The slowing down of life would help to reduce the alienating nature of production/consumption activities as well as their ever-increasing resource and energy intensity. Under capitalism, time-outs are unlikely to be an option. One reason is that capitalism cannot operate effectively under conditions that require reinvestments in the reproduction of nature, which may entail a temporal scale of 100 years or more.[43]

This slow movement questions the hegemony of "industrial" agriculture, overwork, lack of free time, fast food, and fast cars.[44] While such movements are small and primarily middle class, they point to the possibility of human-and-nature-friendly rhythms. Yet the slow movement has little to say about *how* to generate the structural socioeconomic and political changes that would challenge "turbo capitalism."

Conclusion

Global capitalism has accelerated both temporal and spatial rifts (used here in the broadest sense of the word). In addition to the rifts Marx noted in capitalist agriculture, such as those that short-circuit metabolic cycles,[45] there are temporal disjunctures between rates of pollution and the rates at which ecosystems can absorb or tolerate such pollution.[46] There are also spatial rifts in land use, built environments, natural habitats, and the social organization of space.

Auto-centered transport systems and their impact on environmental spaces and resources share a number of features with "fast-food "systems (including the production/consumption of fast

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[39] Carl Honoré, *In Praise of Slowness*.
[40] Geoff Andrews, *The Slow Food Story: Politics and Pleasure* (Montreal: McGill-Queen's University Press, 2008).
[41] *Ibid*.
[42] *Ibid*.; Wendy Parkins, "Out of Time: Fast Subjects and Slow Living," *Time and Society*, Vol. 13, Nos. 2/3, 2004, pp. 363-382.
[43] Brett Clark and Rebecca Clausen, "The Oceanic Crisis: Capitalism and the Degradation of Marine Ecosystems," *Monthly Review*, Vol. 60, No. 3, July-August 2008, p. 107.
[44] Peter E.S. Freund and G.T. Martin, "Fast Cars/Fast Foods: Modes of Consumption, Space-Time, Health and Environmental Consequences," *Capitalism Nature Socialism* Conference, July 23, 2005, Toronto, Canada.
[45] Karl Marx, *Capital, Volume 1* (New York: Vintage, 1976), pp. 637-638.
[46] For an interesting discussion of Marxism and metabolic rifts, see John Bellamy Foster, *Ecology Against Capitalism* (New York: Monthly Review Press, 2002).

food as a product of industrial agriculture and animal husbandry, and the fast food of, for instance, McDonalds). Both are unsustainably energy and resource (including land) intensive, and in terms of calorie-energy exchanges and sustainability, highly inefficient. Both are characterized by dispersed activity sites, which influence local production and consumption. Pears from Peru for sale in New York City and the lone passenger carrying a quart of milk in her or his SUV are concrete examples of this inefficiency.

Temporal contradictions between time for personal use, work, family, and the community and the capitalist social organization of time and social division of labor make it difficult to encourage the emergence of the socialist person that Marx fantasized about in his early writings. In recent decades, despite increases in productivity, the sphere of "autonomy" has shrunken considerably for both humans and nature. For the capitalist, Marx observed long ago: "Time is everything, man is nothing; he is at the most, time's carcass. Quality no longer matters. Quantity alone decides everything."[47] Not only "man" (humans) but nature is "nothing," and the maintenance of the natural conditions are not a concern, since nature is seen by the capitalist as a free gift.[48]

It is possible to envision an ecosocialist future where the means of production and modes of consumption have been reconstituted in an environmentally sustainable and resource/energy efficient manner that recognizes nature and ecosystems as an active agent rather than a commodity to be exploited without limits. Nature, as used here, is a biophysical reality that must be recognized. This recognition is a prerequisite to reconstituting what Clark and York call our "social metabolism" with nature.[49] This reconstitution involves a reorganization of associated producers and their metabolism with nature.[50]

Ecosocialism would localize, contextualize (i.e., make site-specific), and slow down production/consumption. Such a slowing down does not simply refer to deceleration of, for instance, resource and energy consumption or the tempo of production/consumption activities, but to *qualitative changes*. Such changes in the social organization, tempo, scale and spatial contexts of these activities would be paralleled by a reconstitution of the temporality-spatiality of everyday life. The slowing down of everyday life, which may be healthy for humans and nature—along with shorter hours—requires a reconstitution of political, social, structural, and economic contexts in which such temporal issues are situated.

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[47] Karl Marx, *The Poverty of Philosophy* (New York: International Publishers, 1971), p. 54.
[48] Brett Clark and Rebecca Clausen, "The Oceanic Crisis," p. 107.
[49] Brett Clark and Richard York, "Carbon Metabolism," pp. 391-428.
[50] John Bellamy Foster, Brett Clark, and Richard York, "Ecology, The Moment of Truth: An Introduction," *Monthly Review*, Vol. 60, No. 3, July-August 2008, p. 8.