

## ANALYSIS

# Eco-localism and sustainability

Fred Curtis  

Department of Economics, Drew University, 36 Madison Avenue, Madison, NJ 07940, USA

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## Abstract

Economic sustainability is best secured by the creation of local or regional self-reliant, community economies. This is the central argument of eco-local economic theory. Drawing on the experience of local currencies, community corporations, regional food economies and other locally oriented efforts, eco-local theory presents a new analysis of the "economy of place". It focuses on locally symbiotic capital, positive externalities of self-reliance and negative externalities of long-distance trade, and its specific concepts and analyses of the economy, efficiency and economies of scale, and consumption and welfare. Given its specific values and assumptions, it is an economic theory of the social economy that is compatible with, but distinct from, ecological economics.

**Author Keywords:** Globalization; Local; Quality of life; Self-reliance; Sustainability; Symbiotic capital

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# 1. Introduction

The road to environmental sustainability lies in the creation of local, self-reliant, community economies. This is the central argument of the economic paradigm that I will call *eco-localism*. It is the perspective embodied in local currency systems, food co-ops, micro-enterprise, farmers' markets, permaculture, community supported agriculture (CSA) farms, car sharing schemes, barter systems, co-housing and eco-villages, mutual aid, home-based production, community corporations and banks, and localist business alliances. Until now, eco-localist writing has laid out its visions and values, described working eco-local practices, specified policies to build local sustainable economies, developed forceful critiques of globalization on local eco-systems and economies, and, along the way, worked out a few analytical propositions.

However, eco-localists have nowhere laid out their analytical ideas as an explicit, alternative theoretical paradigm<sup>1</sup>. That is the goal of this paper: to develop and present eco-localism as an explicit alternative theoretical paradigm. It shows how the unique vision and values of eco-localism are connected-in positive and normative ways-to its specific concepts and analytical propositions concerning the relationship of place, nature, society and economy. It also examines eco-local conclusions that reject globalization and embrace local self-reliance as the best way to secure environmental sustainability.

The significance of eco-local economic theory is 4-fold. First, it is a distinct alternative to the dominant neoclassical analysis of sustainability. Eco-local theory constitutes a counterweight to the dominant ideology, which (even when not formally studied) has become the "anti-communal" common sense of economic discourse<sup>2</sup>. Building self-reliant, sustainable, local, community economies requires not only good practice and policy, but also good theory.

Second, as a positive economic theory, eco-localism analyzes many economic phenomena outside the conceptual boundaries of conventional theory. These include locally heterogeneous eco-systems, products and consumer tastes, subsistence production, non-maximizing consumer behavior and shared forms of consumption, to name a few. It links these economic phenomena both to its underlying values and to its specific analytical concepts, such as the symbiotic forms of local capital. In so doing, this theory responds to a "disconnect" between the values, vision, practices and policies of eco-localists and conventional discussions of economics and sustainability<sup>3</sup>. Eco-localist theory provides those attempting to create sustainable, self-reliant, local economies with an alternative way to understand their own project, an understanding that has previously been implicit or fragmentary<sup>4</sup>.

Third, the specific economic analyses of eco-localism are important as they (1) challenge the conventional wisdom, (2) revive and reintroduce certain aspects of neoclassical analysis ignored or poorly integrated in conventional discussions of sustainability, and (3) widen the scope of economic inquiry. Some critical issues here are the importance of social capital in preserving natural capital, the role of consumption in achieving sustainability, analysis of the

positive and negative externalities of globalization, limits to the positive association of consumption with economic welfare, and reconceptualization of scale and efficiency. Further, the social, qualitative, and place-based focus of eco-localism presents new challenges and possibilities for conventional and ecological economic analyses of sustainability.

Finally, eco-local theory provides a reality check on conventional pro-globalist perspectives. In the past 50 years, trade and the transportation of goods have grown much faster than gross domestic product. As a result, the provision of necessities depends increasingly on long distance trade, which is itself dependent upon plentiful supplies of cheap petroleum fuels. Today, particularly after the terrorist attacks in the US, foreign oil supplies—on which most nations and most trade depend—seem increasingly insecure and problematic. In such a context, it is important to examine the economic possibilities and the environmental consequences of short distance commerce and the self-reliant, local economies that are at the center of eco-localism.

## 2. Sustainability, environmental impact and ecological economics

As a theory of environmental sustainability, eco-localism has several areas of compatibility with ecological economics. Both conceptualize sustainability as the preservation of natural capital ([Costanza et al]). They also accept sustainability criteria such as those defined by [Daly, 1996b], p. 196. "Renewable resources should be exploited in such a manner that: (1) harvesting rates do not exceed regeneration rates and (2) waste emissions do not exceed the renewable assimilative capacity of the local environment. Nonrenewable resources should be depleted at a rate equal to the rate of creation of renewable substitutes." These criteria define a maximum sustainable scale for the economy. Further, the eco-local analysis of symbiotic local capital is analogous to the ecological economic discussion of strong sustainability, the proposition that the products of human ingenuity have only very limited possibilities of replacing elements of natural capital ([Gowdy, 2000]). Finally, both eco-localists and the majority of ecological economists see the current economic system as exceeding the limits of sustainability.

To present eco-local theory and to distinguish it from other perspectives, the Ehrlich–Holdren IPAT equation is quite useful. ([Ehrlich and Holdren, 1971])<sup>5</sup>:

$$I=PAT$$

where I=environmental impact of the economy, P=population, the number of people, A=average material standard of living and T=throughput (resource consumption, pollution and eco-system destruction) per unit of output (a function of technology). The critical question is how this impact may be reduced to sustainable levels. The eco-localist answer draws on both conventional economic concepts and ecological economics to produce an economic theory quite different from both<sup>6</sup>.

To explore eco-local theory, this paper first presents an overview of eco-localism and then defines the eco-local economy. This is followed by eco-local analysis of capital, technology, scale and efficiency, consumption, trade, self-reliance and a brief critique of globalization.

This is followed by a summary of key eco-local propositions, questions for ecological economics, and future directions for research to extend eco-local theory itself.

### 3. Eco-localism-overview

In eco-localism, "place matters". Here, "place" refers to specific, unique locations with their particular eco-systems, communities, and resources. Place matters not only because local eco-systems provide heterogeneous and varied resources and constraints to localized economies. It matters also because there is "...an inescapable correspondence... between the quality of our places and the quality of the lives lived in them. In short, we need stable, safe, interesting, settings, both rural and urban, in which to flourish as fully human creatures." ([Orr, 1994], p. 161) <sup>7</sup>. The local place-the specific geography of life-defines and is defined by its particular natural environment, culture, community, history and economy-none of which are replicable in a different location.

Eco-localism is the economics of the local (placed) community<sup>8</sup>. Its goal is to establish a healthy community economy. This requires both preservation of the eco-system on which it depends as well as the subordination of the economy to society, the local community<sup>9</sup>. Eco-localism recognizes the social nature of human beings as well as the impact of place on them. It rejects the place-less, community-less economic actor (*homo economicus*) of neoclassical theory with its presumed boundless hedonism and insatiable preferences<sup>10</sup>. Individual economic decisions are made within particular communities and cultures that understand the vital significance of the local eco-system, soils, watershed, etc. to the local economy. In this place-rooted, local context, the health of the one determines the health of the other.

The values embodied in this perspective are explicit. They include social and environmental responsibility, health of the community, stewardship of nature, affection for and commitment to place, fidelity, propriety, and sufficiency<sup>11</sup>. Eco-localists also prize independence, interdependence, security and self-reliance. In its community oriented values of stewardship, fidelity, propriety, sufficiency and neighborliness, eco-localism reflects the perspective of *oikonomia*, "... the management of the household so as to increase its use value to all members of the household over the long term." as opposed to *chrematistics*, the "...manipulation of property and wealth so as to maximize short-term monetary exchange value to the owner" ([Daly and Cobb, 1994], p. 138) that underlies conventional economic analysis. These values speak to issues of quality of life and cannot be reduced to or meaningfully expressed in terms of quantitative variables such as income, financial wealth or goods consumed<sup>12</sup>.

### 4. The eco-local economy

The object of eco-localist analysis is the local or placed economy. This economy differs from the economy of conventional theory in two major ways: its "sectors" and its geographic extent. The sectoral dimension of the economy follows from the value placed on community and quality of life, while its geographic aspect stems from the priority given to both community and the natural environment of local places.

The eco-local economy is not defined solely by the production (for profit), market exchange and consumption of commercial goods and services. Instead, it is equally constituted by collectives and cooperatives, buying clubs, community enterprises, not-for-profits, barter and

skills exchanges, mutual aid, volunteer activity, household and subsistence production, and what is variously termed the informal sector or the underground economy'<sup>13</sup>. This broader definition flows both from the community orientation of eco-localism and its focus on quality of life values. It is a broadly defined social economy.

Though broadly defined in "sectoral" terms, the eco-local economy is more narrowly drawn in its geography. It is a place-specific, bounded economy. Where "the economy" is a national or global construct in conventional theory, in eco-localism it is bounded in space by limits of community, geography and the stewardship of nature.

Natural limits to the eco-local economy are frequently expressed in terms of environmental geographies. For [Sale, 2000], p. 55), its extent is the bio-region, whose "... boundaries are determined by natural characteristics rather than human dictates, distinguishable by particular attributes of flora, fauna, water, climate, soils and landforms, and by human settlements and cultures that those attributes have given rise to" '<sup>14</sup>. For [Berry, 1992], p. 3–4, geographic boundaries follow from both the human need to use the land and the limits of human capabilities. "Land cannot be properly cared for by people who do not know it intimately... there is a limit to how much land can be owned before an owner is unable to take proper care of it. The need for attention increases with the intensity of use. But the *quality* of attention decreases as acreage increases." Here the economy is circumscribed by values of propriety, affection, care and the human limits of knowledge of naturally heterogeneous lands. Natural factors restrict the sustainable economy to local or regional limits.

In addition, other eco-localists who focus on the preservation of community define local economic boundaries in social terms. For example, the local currency system Ithaca Hours limits circulation of its alternative money to a radius of 20 miles around Ithaca, New York, to reinforce inter-local economic relationships and to reduce leakages of resources'<sup>15</sup>. For [Hines, 2000], p. 30), the boundary is set by the size of the human community needed to produce the range of goods and services whose environmental costs the community has decided to bear. By contrast, [Douthwaite, 1996], p. 52 and 55) defines the boundaries in terms of the circulation areas of local newspapers, since readership of local publications indicate interest in "each others' doings" and hence a sense of community. The core of these varied social limits to the local economy is the need for direct contact among community members to preserve the community and its eco-system '<sup>16, 17</sup>. This is the project of building *oikonomia*, or the economy of "neighborhood and subsistence" '<sup>18</sup>. That goal requires a specifically eco-local analysis of capital.

## 5. Capital

One way in which eco-localism differs from conventional theory is in its analysis of capital'<sup>19</sup>. Eco-local capital has five forms: natural, social, physical, financial and human'<sup>20</sup>. These forms of capital are defined with respect to the local economy and are understood to have a symbiotic relationship to one another. In order to support sustainable local economies, each kind of local capital must work to replenish or preserve all the other local forms of capital; they must all "pull in the same direction".

Natural capital is the local eco-system. It provides flora, fauna, water, minerals and eco-system services (e.g. decomposition) to the local economy. The preservation of this natural endowment is at the core of sustainability. Natural capital is location specific and varies from place to place, local economy to local economy. What is special about natural capital within

eco-localism is the stress on its local ecological variability and heterogeneity and their implications for sustainability.

Preservation of local natural capital relies upon the preservation of local social capital-the community-and vice versa. Nature cannot be preserved without the local community/economy that depends on its resources and services, labors to use it well, knows it intimately and passes on the knowledge and values of its sustainability over time. Hence, social capital is central to a functioning, sustainable local economy.

[Putnam, 1993], p. 1 defines social capital as "...features of social organizations, such as networks, norms and trust, that facilitate coordination for mutual benefit. Social capital enhances the benefits of investment in physical and human capital", and, under certain circumstances, natural capital. Social capital-defined as coordination for mutual benefit-is part of all economies and may support the destruction of bio-regional and local economies and eco-systems just as well as it might preserve them. Social capital is part of the World Trade Organization (WTO), transnational oil companies and agribusiness corporations just as much as it is part of local currency systems, food co-ops, eco-villages and community enterprises. The crucial point is not the presence of social capital, but rather its character (i.e. oikonomic or chrematistic)'.<sup>21</sup>. Eco-localist analysis rests on a vision of community-building, place specific, environmentally responsible social capital.

Just as social capital must have an eco-local character to preserve place specific natural capital, so must physical capital have such a character. Physical capital is not limited to tools and machines; it also includes physical infrastructure, such as water and waste systems, roads, bridges, bike paths, energy systems, and residential, commercial and other structures. Such physical infrastructure should be designed to support the circulation of economic activities and resources within the local economy/bio-region and reduce their leakage outside it. Local roads and paths are preferred to superhighways. Locally renewable energy sources and district energy systems are chosen over national energy grids based on fossil fuels. Permaculture design of human environments and other community building principles guide land use patterns'.<sup>22</sup>. Finally, such eco-local physical capital is not just conceived in functional, but also in aesthetic terms, as adding to the quality of life in placed communities.

Financial capital also plays a significant role in building self-reliant local economies. Indeed, a key point of several eco-localists, especially [Douthwaite, 1996], is the necessity of developing local financial institutions. External financing of local investment and business results in both the drainage of local financial resources and also puts pressure on local resource owners to over-harvest and otherwise deplete natural capital to service their debt.

Eco-local financial capital takes the form of local currencies, community banks, local credit unions, micro-finance and credit cooperatives'.<sup>23</sup>. These financial institutions focus on the circulation of financial resources with the local economy and may give priority or favorable interest rates to community building or environment-preserving investments. The point here is that such eco-local finance is influenced by and subordinated to the goals of the social economy'.<sup>24</sup>.

Eco-local analysis of social, physical and financial capital comes together in the discussion of local business. There is a critical distinction between "... a small local business that must share the fate of the local community and a large absentee corporation that is set up to escape the fate of the local community by ruining the local community" ([Berry, 2001], p. 36).

Priority is given to local business that meets local need by manufacturing value-added products on the basis of sustainable yields of local resources, rather than by exporting unsustainable resource harvests to pay for "imported" manufactures<sup>25</sup>.

An excellent illustration of the symbiosis of local natural capital and business is the case of edible oilseed in India<sup>26</sup>. A variety of oilseeds are grown to produce oil for use in cooking, natural remedies, and religious celebrations in different parts of India (e.g. mustard in the North and East and coconut in Kerala). These oilseeds are inter-planted with specific cereals, according to soil, climate and custom (e.g. mustard with wheat and sesame with millet). Such regionally varied oilseeds are processed locally using "low tech" methods by thousands of self-employed artisans. The oil cake "waste" is fed to cattle. Local women are able to buy low cost, fresh and healthy cooking oils on a daily basis (eliminating the need for preservatives or refrigeration). The symbiosis among local soil, oilseeds, cereals, processing, appropriate technology, employment, culture, cuisines and community is evident<sup>27</sup>.

Eco-local business may take the form of individual proprietorships, partnerships, community corporations or cooperatives<sup>28</sup>. They will also require the development of appropriately eco-local human capital, the cooperative business and networking skills necessary to succeed in the community economy<sup>29</sup>. In a broader sense, Ehrenfeld describes eco-local human capital as follows ([Ehrenfeld, 2002], p. 80): "By human capital, I mean the skills in agriculture, crafts, academic learning, mechanics, the arts, and all the other necessary human occupations. Also, I mean the *community fostering skills* of judgement, patience, consideration, and knowledge" [emphasis added].

Natural capital is place specific, bioregional and heterogeneous. It requires the local social capital of placed communities for its preservation. In turn, such communities require appropriate-and hence symbiotic-forms of physical, financial and human capital. But such symbiotic local capital is not merely functional to environmental preservation, it is also what Power calls the "economic base" that assures quality of life.

"The real economic base of a community consists of all those things that make it an attractive place to live, work and do business. That means the economic base includes the quality of the natural environment, the richness of the local culture, the security and stability of the community, the quality of public services and the public works infrastructure, and the quality of the workforce. None of these are things produced by the commercial economy or produced for export. They are provided for outside the commercial economy, yet they are the local area's economic base" ([Power, 1996a], p. 134).

## 6. Technology

From the conventional perspective, environmental impact is reduced as business adopts resource- and energy-efficient and pollution-reducing (or "green") technologies. They both lower pollution levels and resource consumption. They thus reduce throughput per unit of goods and services produced (the T variable) and hence lower environmental impact (I).

The impetus to adopt such green technologies is primarily financial. Either their adoption is a regulatory obligation (in the case of mandated technologies) or they are adopted to directly boost profits. Green technologies may enhance the bottom line in several possible ways. They may reduce energy or materials costs, appeal to niche markets of green consumers, avoid pollution fines, develop new, competitive product lines, or improve the firm's public image.

While such green technologies may have reduced environmental impact, there is no guarantee that they have benign or sustainable impact; better or "less bad" is not necessarily good. The "green-ness" of such technologies is limited by specific environmental regulations, the extent of consumer concern and knowledge, markets for new green products and technologies, and the relative importance of energy and materials in the overall costs of production. In other words, the "green-ness" of technology depends on the financial bottom line. Further, to increase profitability, green technologies would need to be standardized within corporations (and across their globalized operations).

The environmental limits of standardized technologies are well illustrated by the case of mass produced detergent<sup>30</sup>. Manufacturers produce a single detergent soap product for markets throughout the US and Europe. The same formula is used in areas with hard or soft, spring or filtered waters, whether soap laden waste water enters rivers and streams or treatment facilities. The standardized soap is designed to function the same under the most difficult conditions, regardless of local variations. This results in more and stronger chemicals being used than necessary in many areas. Such standardized "worst case" technologies ignore significant differences among local eco-systems to maximize markets and profits. By ignoring such ecological heterogeneity, such universal technologies-"green" or not-tend to increase damage to the environment more than technologies and products adapted to local conditions.

By contrast, eco-localism generally calls for "low tech", "appropriate" or "intermediate", small-scale, decentralized green technologies. Technologies of production and consumption are limited by eco-local consumption choices (see below), values and the goals of minimizing harmful technological impacts on community and nature. Such technologies are generally locally affordable, heterogeneous, and well adapted to local culture, economy, community and environment. They are designed to minimize pollution and the use of non-renewable resources, both in their fabrication and in their use. According to [Sale, 1980], p. 158), such technology would "... attempt to adopt itself to the immediate local surroundings, using local materials and energy sources, matching itself to local climates, meshing with local customs and culture...". Such technology exists within the boundaries of and serves to support eco-local economies; it is part of the symbiotic capital base.

For eco-local theory, technology is put in its local context, focusing on the costs to the local economy, community and eco-system. This may lead eco-localists to decide not to adopt technologies that are standard elsewhere. The Amish are often cited in this context. "Most Amish sects do not reject electricity anymore, but only electricity brought directly from the outer world into the home, where it may become an "umbilical cord to worldly distractions and unnecessary gadgets". Home-generated electricity, from wind, sun or diesel motor, is generally accepted for use in the barn and in the workshop" ([Logsdon, 1994], p. 134). Such social or cultural limits on technology reduce its social and environmental costs, minimize dependence on the outside economy, and lower money costs of production. In addition to renewable forms of energy whose fuel (sun, water or wind) is locally available, other examples of appropriate agricultural technology may include the use of inter-cropping and integrated pest management instead of chemical pesticides, compost or manure instead of petroleum based fertilizer, and draft animals rather than tractors in the fields<sup>31</sup>. While such choices are consistent with eco-local perspectives and values, they also raise the questions of scale and efficiency.

## **7. Scale and efficiency**

"Small is the scale of efficient, dynamic, democratic and environmentally benign societies" ([Morris, 1996], p. 438). Scale is a key issue of economic sustainability. Herman Daly first posed this issue regarding the impact of the national (or global) economy on its eco-system. The eco-local scale issue is the appropriate size or scale of economies and firms (or production processes) relative to their local eco-system or bioregion. The boundaries of eco-local communities and the joined goals of the reproduction of local natural and social capital require small-scale business and associated small-scale technologies.

Such small scale production and technologies is anathema to the conventional wisdom which accepts the concept of economies of scale as usually understood. As the scale of production increases (all inputs increasing simultaneously), economies of scale predicts that the per unit resource and monetary cost of production both decline (as output increases faster than inputs). Such large-scale production is seen as efficient in engineering terms: more physical output per unit of physical inputs.

If such economies of scale characterize most production processes, production is most efficiently organized on a large-scale, centralized basis. To achieve such economies of scale requires production of standardized products on a large-batch basis. Further, such economies of scale and centralized production support the economic specialization inherent in comparative advantage theories of free trade. Economies of scale imply long distance trade (and, of course, cheap oil).

Eco-localists reject such arguments in two ways. On the one hand, they argue that the supposed efficiencies of large-scale economies of scale are largely illusory. On the other hand, they reject the monolithic single product output standard of benefit of the conventional economies of scale analysis and counterpose an alternative standard of efficiency or benefit arising from eco-local values and analysis.

Larger, centralized and hence distant production-whether of food or manufactured goods-has cost increasing diseconomies of scale. They include increased managerial, communications, marketing and transportation costs. They also include costs of consumer satisfaction. "The larger the distance between producers and consumers, the harder it is to fine-tune products to the particular tastes of local markets." (Shuman, p. 57) Further, the apparent economies of scale are often due more to subsidies sought by large producers than to production efficiencies. Subsidies to transportation are of particular note to eco-localists<sup>32</sup>. "The World Resources Institute... estimates that the annual federal subsidy to cars and trucks is \$300 billion a year... Once Americans start paying the full costs of hauling people and goods halfway around the world, community corporations will find the economies of local production more and more attractive"([Shuman, 1998], p. 168). The long distance, centralized products of economies of scale-once the diseconomies and subsidies are accounted for-may be both more expensive and more environmentally damaging than local production, as the "imports" have higher throughput.

Where scale economies do exist, eco-localists argue, they do so at output levels small enough to be compatible with more decentralized, local production. In manufacturing, minimized per unit costs and input requirements do not require large output runs, unduly large or expensive fixed inputs or centralized production. Flexible computer-based technologies (such as computer numerically controlled machine tools) frequently allow small, decentralized firms to manufacture cost-competitive products within local economies on a small batch basis<sup>33</sup>.

Where larger scale production efforts are required, several small enterprises may join together

temporarily to undertake a project too large for any one of them alone'<sup>34</sup>. Such decentralized flexible networks make possible the manufacture of large, non-standard products for local needs without requiring the kind of capital investment that only makes economic sense within centralized, large scale mass production.

Eco-localists also reject the traditional economies of scale argument based on their specific criteria of evaluation. As [Norgaard, 1994], p. 161 puts it, "How we think about scale depends on what we think is important." And getting the most output of a single product per unit of purchased inputs is not the prime eco-local goal. Rather, as illustrated by the oilseed case, eco-localism has multiple goals-preservation of nature, health of community, provision of economic needs and quality of life-some of which are harmed by increasing the scale of production, large-batch technologies and centralized, long distance production.

As [Berry, 1995], p. 35) puts it, "If economists ever pay attention to such matters, they may find that as the scale of an enterprise increases, its standards become more and more simple, and it answers fewer and fewer needs of the local community". These simplified standards are engineering efficiency and the bottom line and not the multiple standards of high quality goods, minimal environmental damage, community relationships, local employment, etc. In effect, to eco-localists, the question of scale is largely a question of their qualitative goals and not quantitative calculations; in this way, too, the economic is subordinated to the social and the natural.

## 8. Consumption

For eco-localist theory, the reduction of human environmental impact requires both throughput- reducing technological change and lower average material standards of living (the A variable in the IPAT equation). Such reductions in consumption will be borne primarily by those in wealthier societies, particularly as the material standards of living of those in poor economies are brought up to subsistence levels. The brunt of such reductions will be borne by the currently high consuming economies not only for ethical reasons of fairness but also because limiting consumption to eco-local resources reduces a community's ecological footprint to its local geographic borders. Wealthy areas-under eco-localism-would no longer support their high life styles by using their financial wealth to purchase the resources of other places or to discard their wastes there. Reducing material per capita consumption may be the most difficult aspect of eco-localism for many to accept as it contravenes the culture of consumerism, the more-is-better assumptions of conventional economic theory, existing settlement patterns (cities), and the goals of globalization.

For conventional theory, economic welfare increases with the consumption of purchased goods and services. Given assumptions of non-satiation and utility maximization and the focus on wants rather than needs, there are no limits to consumption based welfare; there is no enough, no sufficiency. Globalization is understood to be an efficient mechanism as it provides (standardized) consumer products to the largest possible mass market for the lowest price charged to consumers ["What does the globalized economy mean? The president of Nabisco once defined it as "a world of homogeneous consumption" ([Norberg-Hodge, 1997], p. 2)]. Further, conventional theory sees the growth of consumer income and spending as creating markets for "green products" (with lower throughput), an environmental benefit.

As with the issue of scale, eco-localists both draw on more conventional evaluations of consumerism and also counterpose their own critique of consumption. They reject the

conclusion that more is better, that increasing purchases of goods and services always results in greater welfare. Here eco-localists discuss competitive consumption (keeping up with the Joneses), and defensive and positional goods, whose increased consumption does not indicate a general increase in welfare<sup>35</sup>. Commodities purchased to get ahead of someone else, to make up for the negative externalities of someone else's consumption, or to follow the leader or show off do not result in more than temporary, zero-sum individual increases in subjective welfare. They do not increase social welfare.

As for green consumerism, it has three major failings. First, it reinforces consumerism in general (commodity fetishism in Earth Day garb). Second, consumers may feel that by purchasing the recycled or "green" option they are doing enough to reduce their environmental impact and thus may not address larger issues. Finally, green consumerism portrays environmental preservation as a "luxury good", affordable only when your income allows higher priced options. By the time that consumers reach the level of income where the green preferences kick in, the impact of their overall consumption may be much greater than any reduction in impact due to the selective purchase of some green (lower throughput) goods. As an unbounded, want-based process, consumption does not "deliver the goods"- either in terms of (subjective) welfare or environmental sustainability.

Instead of wants, preferences, consumption and utility maximization, eco-localists focus on needs and the quality of life. They emphasize the quality of necessities rather than quantities of luxuries. Indeed, some seek the minimum levels of commodity consumption consistent with a high quality of life<sup>36</sup>. Consumerism, by contrast, multiplies wants and then seeks their satisfaction through the purchase of ever larger bundles of commodities, i.e. greater affluence that is less and less sustainable.

Eco-local economies reduce both consumption and its environmental impact while improving quality of life. First, goods produced and consumed in eco-local economies have fewer transportation resources (fuel, vehicles, roads, etc.) and hence pollution embodied in them. Local consumption of local products reduces miles of freight travel. Within local communities the proximate siting of residence, work site, schools and shopping districts to walkable or bikable distances further reduces personal transportation needs. Fewer miles are driven, less time is spent in traffic jams and searching for parking places and the quality of life improves.

Second, eco-local consumption is largely consumption of goods produced within the boundaries of the eco-local community, where the consumers themselves reside. This creates what I will call an IMBY (in my back yard) effect mentioned by many eco-localists. Any pollution, waste disposal or resource depletion arising from the production or use of locally produced goods and services remains in the community, to be borne by the local purchasers of the goods and their neighbors. As a result, only such products whose environmental impacts are acceptable to the community will be produced. "In any such economy, the concept of *waste*, for example, does not really exist. Things that cannot be consumed and things whose waste products cannot be absorbed within such a distinct eco-region cannot be produced. Such a moral economy in a particular region requires, evidently, a community that feels responsible for sustaining the self-regenerative capacities of the region (Bennholdt-Thomsen and Mies, 1999), p. 153)<sup>37</sup>. The IMBY impact of eco-localism both reduces pollution and resource depletion out of "cost avoidance" and it also reinforces the values of neighborhood and subsistence. It limits the quantity of production but not the quality of life.

Localizing consumption and its environmental costs creates pressures to produce high quality, long lasting necessities (which may also be higher priced, though this is not inevitable). Consumers may also respond to ecological limits (and to any higher prices) by reducing the number of commodities they purchase individually. Co-housing, eco-villages, car sharing clubs, and local tool libraries are some creative responses<sup>38</sup>. They may also embrace "voluntary simplicity", a conscious choice to focus less on quantity of products and more on quality of life<sup>39</sup>. Voluntary simplicity and sharing may also resolve the "poverty of time", spending so much time working to purchase so many material possessions that there is too little time left for non-material needs and pleasures<sup>40</sup>. This is not to imply that sharing and voluntary simplicity are only reactive, second best strategies for making do with less. Rather, they may be the positive, conscious life style choices that lead people to live in eco-local communities.

Finally, ecological consumption also rests on the non-commercial or household economy. Consumers are not only consumers in eco-local theory; they are also producers. Eco-local "consumers" purchase raw materials, seeds, tools and ingredients and produce some of their own needs such as food, cooked meals and furniture and clothing repairs<sup>41</sup>. Because such consumers do produce some of their own needs from locally available materials or ingredients to suit their own tastes, they make better use of local resources such as soil and climate.

## 9. Trade and self-reliance

The eco-local vision of self-reliant, place-based community economies rests upon its value of community, stewardship, sufficiency and quality of life. It is also based on analytical propositions about the environmental effects of IMBY, symbiotic local capitals, and possibilities of small scale production efficiencies. The clear conclusion of eco-localism is that sustainability presumes eco-local economies are largely self-reliant.

Such self-reliance, in the analysis of [Galtung, 1986], p. 101), has two arguments in its favor: avoiding the negative externalities of long distance trade and securing positive externalities of economic activity within the bordered economy. "... the basic rule of self-reliance is this: *produce what you need using your own resources, internalizing the challenges this involves, growing with the challenges, neither giving the most challenging tasks (positive externalities) to somebody else on whom you become dependent, nor exporting negative externalities to somebody else to whom you do damage and who may become dependent on you*".

A self-reliant economy creates pressures to both reduce the negative and increase the positive externalities. This results in less pollution, resource depletion, etc. as discussed above. It also increases the benefits of community-building, development of local and locally oriented social and human capital, eco-system restoration and the consequent improved quality of life.

Yet self-reliance is not complete self-sufficiency or autarky. Not all local economies have the full complement of natural resources-plants, animals, minerals, soils, climate, etc.-needed to meet all fundamental human needs, or to satisfy wants, even within socially and voluntarily determined limits on consumption choices. With such gaps, the alternatives are deprivation-and a lower quality of life-or trade. What role does, can, should trade have in an eco-local economy?

For eco-localists, the answer is clear. Local economies should produce necessary goods and services to meet fundamental needs within their boundaries if at all possible. Any surplus

production-after meeting needs of local sufficiency-may be traded outside the local economy'<sup>42</sup>. But such surpluses of particular goods should not be trade to meet fundamental local needs. The point is to avoid dependence on long distance trade for core consumer goods. Eco-localists support such limited trade in two ways: by defining strict conditions for external trade and by developing locally-oriented, import substitution, linkage-building policies, including targeting specific economic sectors for self-sufficiency.

One set of eco-local trade proposals is stated clearly by [Milani, 2000], p. 201:

Regenerative trade policy should *discourage* most external trade and direct investment and *encourage* the flow of information, especially that which helps communities and regions generate and recycle their own capital while cultivating their natural and social productivity'<sup>43</sup>.

Ending subsidies to brown [polluting] industry, and particularly cheap energy, must be a prerequisite for any and all external trade. Most global trade is possible only because of dirty energy and minimal transport costs.

External trade incentives and disincentives should be based on eco-indicators, full-cost accounting, and real social need. They also should prioritize regenerative development in the Third World'<sup>44</sup>.

Much of this prescription is compatible with mainstream and ecological economics: freer information flows, ending subsidies to pollution and especially to fossil fuel use in transportation, and taxation of environmental externalities. However, eco-localists go further by focusing on intra-versus inter-sectoral trade to reduce dependence. Raw materials (primary products) could be exchanged externally for other raw materials but should not be exchanged for manufactured goods under such criteria'<sup>45</sup>. Finally, eco-localists prioritize local production of basic necessities, including food, clothing, shelter and energy and seek to avoid depending on trade for them.

The necessary counterpart to such external trade is the creation of local import substitution production. The goal is to produce the vital necessities of the community with local resources so as to control rather than be controlled by external relationships. Complementary goals are to diversify local economic capital, skills and experience ([Shuman, 1998], p. 54) and to "... reconnect material cycles, as well as monetary cycles, on the regional level. Forging more business links in the region can create locally intensified economies, which is also desirable for reasons of economic security and enhanced political autonomy" ([Sachs, 1999], p. 206).

As desirable as locally oriented import substitution might be from this perspective, it is not without issues. Eco-localists note two sorts: the costs of import substitution and difficulties in implementing it on a local or regional scale. The potential costs are inefficiency, higher prices and less variety of products available on local markets. As noted above, eco-localists question the efficiency of long distance trade. "Even if the indirect system [external trade] was more efficient, we ought to at least discuss how much inefficiency we would tolerate from the direct route [local production] in order to reduce the risk of our lives being blighted and our livelihoods being disrupted by instabilities in the external world" ([Douthwaite, 1996], p. 34)'<sup>46</sup>. Efficiency, once again, is set in the context of multiple values and full cost accounting of alternatives.

As for the supposed higher prices of locally produced goods, there are four responses. First, they may not be higher, particularly if transportation subsidies are ended. Second, products

may be of higher quality (also a result of knowing who made what you buy) and last longer so as to minimize resource use. If so, consumers will pay a higher price for a higher quality good. Third, higher prices may be an acceptable trade-off. "A community that chooses to become self-reliant may well decide to accept more expensive goods and services in the name of a higher quality of life" ([Shuman, 1998], p. 50). That acceptance may depend on knowing that money spent stays in the community, rather than leaking out of it. Lastly, eco-localists question the value of external prices as a guide to local decisions. "Existing levels of prices and profits cannot be allowed to determine whether or not we should make or grow something on our communities. This is because there is no connection between an item's value to our community and the price our [external] neighbors pay for it in normal times" ([Douthwaite, 1996], p. 35). Eco-localists do not value low prices (and the increasing consumer purchases they make possible) above concerns about the negative social and environmental externalities and subsidies that underlie such prices.

Finally, there is the question of product variety. On the one hand, the sacrifice of product variety could be a consciously chosen trade-off for the benefits of local products and avoiding the costs of imports<sup>47</sup>. One such benefit might be higher quality goods, as mentioned above. On the other hand, the variety of products made possible by imports (i.e. that cannot be made locally) may be more fanciful than real. Imported goods, standardized to fit large-batch production methods and global markets, may well not meet local needs or satisfy local tastes as well as the "home grown" alternatives.

The second sort of difficulty with import substitution is the creation of the backward and forward linkages among producers and between producers and consumers to reduce the need for external suppliers and markets. The greater the business to business backward linkages to suppliers and the forward linkages to customers, the more self-sufficient a local economy can be<sup>48</sup>. Increasing this degree of self-sufficiency raises the local economic multiplier, further enhancing demand for local goods and the degree of self-sufficiency ([Power, 1996a and Power, 1993]). This requires reducing linkages to the external economy.

There are many suggestions of how to do this. One program is laid out by [Shuman, 1998], p. 50. "Three strategies can help accomplish this. The first... is to nurture business that reduces imports for basic needs... The second... is to keep ownership of business local, so that the sudden departure of a firm on which a community depends is virtually impossible. The third strategy... is to channel local savings and investment capital into the building of the local economy"<sup>49</sup>. The focus on basic needs, local ownership and capital leads several eco-localists to target specific economic sectors as being critical to self-reliance and eco-localism. Key sectors often identified are food and agriculture, energy, and finance (money, banking and investment)<sup>50</sup>. As well as core sectors of self-reliance, they are also seen as appropriate places to begin the construction of eco-localism.

Building on its discussion of capital, scale, technology and consumption, the eco-local analysis of self-reliance, import substitution, and trade focuses on increasing positive externalities, reducing negative ones and improving the quality of local life. It does not ignore the costs or trade-offs of self-reliance or the difficulties of implementing it. Rather, eco-localism counts them as well as the usually omitted benefits of self-reliance and sets any such "cost-benefit analysis" of self-reliance versus globalization within its unique vision and values.

## **10. Globalization and sustainability: an eco-local critique**

Economic globalization may be defined as the increasing integration of economic activities via the liberalization of international trade and investment, as presently institutionalized by transnational corporations, the WTO, International Monetary Fund (IMF), World Bank, European Union, North American Free Trade Agreement (NAFTA), etc. Two of the major predicted and desired benefits of globalization are increasing global per capita incomes and lower prices for consumer goods which together result in greater purchasing power and economic welfare. From the conventional perspective, such rising real incomes may reduce environmental impact in two ways. First, as incomes rise past some threshold, consumers begin to shift their spending to higher priced but lower impact "green" goods and services; they exercise their preference for environmental goods (thereby reducing T). Second, by liberalizing trade and investment, globalization encourages the spread of green technologies<sup>51</sup>. This is due to the incentives of selling niche environmental goods (particularly capital goods) in larger markets. To the extent that globalization does support the spread of green technologies, it also makes it possible for developing nations to "leapfrog" past "dirty" to "clean" technologies as they industrialize.

From the mainstream perspective, reducing environmental impact to sustainable levels is very largely a matter of getting the technology right. This depends on existing policies, institutions and incentives: free trade and investment, profits, and competition. The primary policy reforms concern subsidy and tax shifting and further liberalization of trade and investment.

The critique of globalization as unsustainable takes two paths. On the one hand, there is the critique that connects the negative environmental consequences of globalization to its specific institutional structure (e.g. the WTO, IMF and NAFTA)<sup>52</sup>. It focuses on specific treaty provisions and institutional decisions that reduce the ability of member states to regulate environmental practices and reduce environmental damage. At issue here are the "product versus process" rules, the use of institutionally defined 'scientific standards' to determine allowable levels of pollutants, the interpretation of health and environmental laws as treaty-violating "trade barriers", and the subordination of environmental concerns to trade promotion, as has been widely discussed<sup>53</sup>. By focusing on anti-sustainability provisions of international economic treaties and actions of international economic institutions, this position implies that globalization might be made environmentally sustainable, either by appropriate reforms to existing international economic institutions and treaties or by their replacement by new bodies and agreements that give greater priority to environmental concerns.

Eco-localists, by contrast, focus on the environmental damages of globalization per se, however, it is structured, under whatever treaties. This sui generis critique of globalization centers on three major issues: consumption, long distance trade and international economic competition. Globalization increases the worldwide consumption of goods and services, and therefore, it increases resource depletion, pollution, eco-system destruction, etc. It does this in several ways. First, globalization spreads a consumer culture; it sells the affluent, commodity-laden Western lifestyle as the goal of economic activity and development<sup>54</sup>. This results in the replacement of local, lower throughput goods by higher throughput imported commodities and in greater overall levels of consumption. More consumption is promoted over enhanced quality of life. Moreover, if globalization lowers consumer goods prices, it also increases purchasing power and consumption.

At the same time, by lengthening supply chains to transcontinental and transoceanic distances, globalization vastly increases the distances which goods are shipped (raising T), a point raised by many eco-localists<sup>55</sup>. "Between 1995 and 1998, the tonnage of goods carried by ship rose

more than 6-fold, to 5.1 billion. Meanwhile the unit cost of carrying freight by ship dropped 70 % between 1920 and 1990 (in 1990 dollars)...Air freight soared [between 1950 and 1998], from 730 million to 99 billion ton kilometers carried." (French, p. 6) Long distance transportation of goods has three major impacts on the environment. First, despite increases in fuel efficiency, the growth of freight tonnage-miles has greatly increased the amount of fossil fuel consumed. Second, there is an increasing tendency to ship freight via more polluting transport modes, i.e. air versus sea and road versus rail. Finally, the (NIMBY) separation of production from consumption by long distances means that the final consumers of products do not (or think that they do not) bear the environmental costs of the pollution and resource depletion entailed in the production of the imported goods they buy. They are consequently willing to purchase more of these products than they would if their production was located nearby.

The final environmental cost of globalization concerns competition related to both trade and investment. International competition in goods may lower the costs of production and prices not only by increasing materials or energy efficiency. It may also reduce the costs of production by shifting them onto the environment (i.e. by creating negative externalities). This trade-competitive impact on the environment may be worsened by investment liberalization. Nations competing for foreign investment may do so in part by weakening domestic environmental regulations. This, too, would increase throughput per unit output produced.

Thus, the eco-localist critique of globalization does not depend only on the impact of trade treaties or international economic institutions on the environment. Instead, it is based on the impact of long supply chains, the greater separation of production and consumption, cheaper prices and consumerism. Globalization harms the environment, from this perspective, both by increasing throughput per unit consumed and by increasing overall material consumption.

From the eco-local point of view, the beneficial effects of globalization on the environment are small, not yet realized, or not beneficial at all (e.g. cheaper prices that increase consumption). Eco-localism agrees with the institutional or treaty-based critique of globalization. To the extent that global economic institutions could be reformed to eliminate their environmentally harmful provisions, so much the better (i.e. a less unsustainable global economy is better than a more unsustainable one). However, such reforms would not address the inherent unsustainability and undesirability of globalization, i.e. economies based on long distance trade and investment. Thus, eco-localists conclude that the only way to create economic sustainability is to (re)localize the economy.

## **11. Conclusion**

### **11.1. Eco-localism in sum**

As presented here, what I have chosen to call eco-localism is an alternative economic theory of environmental sustainability, one drawing conclusions largely contrary to dominant perspectives on sustainability and globalization. It is very largely not an academic endeavor, nor does it have a complete presentation in any single place as a theoretical paradigm. It has been the task of this paper to draw together its theoretical elements and so demonstrate its breadth, depth and coherence as an alternative paradigm.

Eco-localism is an explicitly normative framework. It begins with its values and its vision of a sustainable economy and society; this is clear in the work of every eco-local writer. Those values and that vision exhibit a preference for community, place, and nature. Yet, eco-localism is more than its values and vision; it is also an analytical paradigm. It concludes that environmental sustainability requires small-scale, local or regional, self-reliant community economies on the basis of specific analytical propositions and concepts, and from a clear set of assumptions. These eco-local propositions include:

The environment, natural capital, varies by locality and region.

Sustainable use and preservation of such locally varied eco-systems requires locally adapted knowledge, communities, products, cultures and practices.

Globalization and long distance trade and investment undermine the place-specific knowledges, communities, cultures and economies necessary to sustainability.

Sustainability requires locally adapted and symbiotic forms of social, physical, human and financial capital. Business enterprises, networks, education, money, banking, and investment all need to be locally oriented.

Not all people have insatiable preferences. Not all needs are individual. Humans have non-material as well as material needs. Human nature is broader than homo economicus. Thus, a broad goal of economic activity is quality of life, only part of which rests on individual purchase and consumption of commodities.

Sustainability requires the subordination of financial capital to social and natural capital preservation. Economic decision-making must be subordinated to society and nature.

By uniting production and consumption within eco-local boundaries, both positive and negative externalities of the production and use of goods and services are localized. This creates pressure to reduce pollution and resource use and to increase positive externalities such as ecological restoration and community building.

The relatively small scale of production in decentralized local economies may be efficient as the goal is not simply to maximize a single output relative to its inputs, but to do so in a particular social context with multiple goals. Efficiency is redefined.

By producing goods and services with local needs and consumer desires in mind, local economies may produce higher quality, longer lasting and more locally appropriate and useful products. Consumers may meet their needs by sharing, social or collective consumption, and individual purchases and by producing some of what they consume.

Reduction of environmental impact to levels within sustainable limits is the joint result of both lowered average material standards of living and lowered throughput per unit output via the use of locally appropriate technologies and the shortening of the economic distances separating production and consumption.

Finally, the values, vision, analyses and conclusions of eco-localism are not merely theoretical. They are in use in many communities, institutions and localities. They are the deliberate and positive choice of many consumers, investors, businesses, home-owners, workers, farmers, and eaters. Eco-localism is thus a positive economic paradigm; it describes the reality of many people's lives as well as the desires of many others.

## **11.2. Eco-localism, ecological economics and future directions for research**

Eco-local economic theory draws on and overlaps with ecological economics but is ultimately a separate paradigm. It has compatible concepts of sustainability. It also accepts, indeed is based upon, the precept that there are ecological limits to economic size and that scale is a core issue of sustainability. Further, by its focus on the heterogeneity of eco-systems and the analysis of symbiotic capitals, eco-localism takes the strong sustainability position that there

are only very limited possibilities for the replacement of natural capital with other types of capital. In these areas, the two approaches overlap. However, its origin, values, and vision-while often compatible-are distinct.

As an economic theory, eco-localism has many areas that need work<sup>56</sup>. It has had little or nothing to say about the third environmental impact variable of population<sup>57</sup>. Locally limited resources cannot support growing populations. More work also need to be done on (1) the positive economic, social and natural externalities of IMBY localization, (2) the multi-faceted human nature implicit in the values and priorities of eco-localism, including questions of individual versus social, and material versus non-material needs, (3) how to keep trade within eco-local parameters so that it does not undermine local economies, (4) economies of small scale production, (5) the impact of eco-localism on employment, poverty and inequality, (6) the place of cities with respect to eco-local economies, and (7) how to reassert the institutional primacy of social values over economic decisions.

Larger, more theoretical issues to be addressed include the class or social relations of eco-localism, in particular the relation of eco-localism to capitalism. Much eco-localist writing seems to take a position in favor of non-capitalist economic forms and against corporate capitalism. Other eco-localists such as [Korten, 1999] differentiate between a market economy which is compatible with eco-localism and corporate globalization which is not. These issues need to be addressed, especially to clarify the social justice dimension of eco-localism. What is clear at present is that-to be eco-localist as described above, any economic (or class) relations would have to abide by eco-local limits and values. It seems unlikely that such constraints would be compatible with most forms of capitalism given its imperative for profit and growth.

Another direction for further analysis is the implementation of eco-localism. Can it be partially enacted or phased in over time? Indeed, is eco-localism is an alternative to global capitalism or simply a better way to connect to it? [Most eco-localists would take the former position.] How would cities be integrated into a localist network? They cannot be self-sufficient, reducing their ecological footprints to their geographical boundaries. Could they, however, adopt some of the precepts of eco-localism and thereby become more sustainable?<sup>58</sup> Finally, would national self-reliance be a prerequisite for the establishment of eco-local economies? These are some of the many questions that have yet to be explored.

Eco-localism also raises questions for ecological economics. Can economic impact on the environment be lowered sufficiently by changes in population growth and throughput (technology) alone or will it also require reduced average material standards of living, particularly for the wealthiest? If it does require reduced levels of affluence, will profits and markets still be useful in moving an economy toward sustainability? Is globalization (the long distance economy) reformable to the point of becoming sustainable? How can quality of life, non-material needs, community and social capital, and the non-commercial sectors of the economy be integrated into ecological economic analysis? These are but a few of the questions arising from the encounter of eco-localism with ecological economics.

### **11.3. A final word**

Eco-localism exists in specific practices, places and communities and in the values and affirmative economic choices of consumers, farmers, small business owners and many others. It is a growing movement of place, community and nature. It contends with local, regional,

national and international institutions, laws, regulations and treaties that undermine it at every turn. It also contends with a hegemonic, market-oriented, profit-centered, consumerist, trade supremacist economic discourse. This "conventional economic wisdom" views eco-localism as being either ignorant of basic economic realities and theory or as understanding them very poorly.

It has been the goal of this paper to draw together the theoretical fragments within eco-localism and to show that eco-localism is neither ignorant nor bad economics but instead that it is an alternative economic paradigm. It is a different economic theory based in its own specific values, assumptions, concepts and analyses. Hence, its conclusions and policies diverge from those of conventional economic theories of sustainability. Eco-localism suggests ultimately a radical reorganization of economic life across the globe, dis-assembly of globalization, re-orientation to a broader range of human needs and values and environmental imperatives than is present in conventional economic theory or policy. To this extent, eco-localism is not only a more explicit normative theory, it may also be a more useful positive economic paradigm.

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Corresponding author. Tel.: +1-973-408-3432; fax: +1-973-408-3142

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<sup>1</sup> [Power, 1996a and Power, 1996b] has gone the furthest in this direction.

<sup>2</sup> [Douthwaite, 1996], p. 335.

<sup>3</sup> It may also close the "disconnect" between the personal values and preferences of many conventional economists and the theory they profess.

<sup>4</sup> For another perspective on creating a discourse or subjectivity appropriate to local, alternative, or non-capitalist economies, see [Gibson-Graham, 2002], pp. 34–40.

<sup>5</sup> This equation is, in fact, an identity:  $I=P \times Y/P \times I/Y$ , where I=impact defined in throughput terms, Y=real gross domestic product, P=population, Y/P=per capita GDP, and I/Y=throughput impact per unit of real GDP. However, the I=PAT formulation permits a clearer focus on the consumption (A) and technology (T) variables. My thanks to Herman Daly for pointing out the identity in his comments on an earlier version of this paper.

<sup>6</sup> [Daly, 1996a] presents themes that are eco-localist. However, his focus is less on local self-reliance than on national self-sufficiency and most of his writings are not directed at localism per se.

<sup>7</sup> Eco-localism, thus rests on a more multi-faceted view of human nature than does neoclassical economic theory. My thanks to reviewer William Rees for raising this issue.

<sup>8</sup> What I have labeled "eco-localism" has many other labels. These include cosmopolitan localism ([Schroyer, 1997]), positive localism ([Korten, 1999]), the subsistence perspective ([Bennholdt-Thomsen and Mies, 1999]), the living economy ([Ekins, 1986]), and the conserver society ([Trainer, 1995]). For the most part, eco-localist writers are neither economists nor academics. The exceptions are Richard Douthwaite in Ireland, Thomas Michael Power in the US and Ted Trainer in Australia. Eco-localist literature includes several periodicals, among them *Communities: A Journal of Cooperative Living*, *Co-op America Quarterly*, *The Ecologist*, *Grassroots Economic Organizing*, *Home Town Advantage* (an on-line newsletter), *New Rules* (no longer published), *Orion*, *Plain* (no longer published), *Resurgence*, *Utne Reader*, *Whole Earth Review*, and *Yes! A Journal of Positive Futures* (and its predecessor, *In Context*).

<sup>9</sup> See [Douthwaite, 1996], p. 362. Eco-localism, thus, calls for the end of the subordination of society to the requirements of the market economy. Such subordination was discussed by [Polanyi, 1957] (p. 71).

<sup>10</sup> [Daly and Cobb, 1994], pp. 159–168, present a critical alternative to homo economicus in their analysis of the "person-in-community".

<sup>11</sup> See the various works of Wendell Berry and also [Jackson, 1996, Norberg-Hodge, 1991, Orr, 1994 and Power, 1996a].

<sup>12</sup> On the pursuit of quality, see [Power, 1993 and Power, 1996a].

<sup>13</sup> Among others, see [Bennholdt-Thomsen and Mies, 1999, Berry, 2001, Meeker-Lowry, 1995, Ross, 1986, Shuman, 1998 and Trainer, 1995]. To the extent that conventional theory is cognizant of these economic activities, it usually lumps them under the "informal" or "underground" banners and either ignores them or analyzes them as a source of small scale commercial entrepreneurialism consistent with the usual maximizing principles and assumptions.

<sup>14</sup> On bioregionalism, see also [Andruss et al].

<sup>15</sup> On Ithaca Hours, see [Shuman, 1998], pp. 135–137 and [Douthwaite, 1996], pp. 80–85.

<sup>16</sup> [Kohr, 1977, Sale, 1980 and Hines, 2000], each produce a numerical estimate of such eco-local size. For Kohr, it is a population of 5000 for an economic optimum and 7000–12000 for a political optimum. For Sale, it is a population of 5000–10000. Hines opts for limits of 1500–10000 people and a radius of 10–15 miles. These limits raise the issue of the relation of eco-localism to cities, mega-cities and high density metropolitan areas. With the exception of [Morris, 1982], the issue of cities has not been considered at length by eco-localists.

<sup>17</sup> By contrast, the geographic boundaries of the economy are defined by calculations of profit in conventional analyses. As long as more profit is to be made by global trade, it will be undertaken. Profit rather than direct concerns of nature or community determines the physical extent of economic activity. National and other political boundaries are only relevant to the extent that they impact the profit calculation.

<sup>18</sup> There is a temptation to conceive the eco-local economy too strictly in neighborhood terms, an area of a few square blocks around one's residence. It is better thought of as being the size of a county, state or a watershed of a few hundred or thousand square miles. See [Durning, 1996] as an example.

<sup>19</sup> Following [Daly, 1996b], (p. 80), capital is understood here as " ... a stock that yields a flow of useful goods and services into the future."

<sup>20</sup> See [Ekins, 1993].

<sup>21</sup> For the most part, eco-local theory does not directly address issue of class or of the relation of the non-capitalist to capitalist economic forms directly. Exceptions include the eco-feminists [Bennholdt-Thomsen and Mies, 1999] and the feminist economists [Gibson-Graham, 2002].

<sup>22</sup> Permaculture is "... the conscious design of land use and human settlements on a low-input, sustainable basis, which shares many features with bioregionalism..." ([Douthwaite, 1996], p. 54). See [Roseland, 1998].

<sup>23</sup> See [Meeker-Lowry, 1995].

<sup>24</sup> This is the reverse of conventional theory. There, in order to preserve natural capital, financial capital (seeking maximum return) leads to the development of resource and energy efficient, green technologies. Financial incentives, rather than social values, drives sustainability from the conventional perspective.

<sup>25</sup> See [Douthwaite, 1996, Power, 1996a and Shuman, 1998].

<sup>26</sup> This case is taken from [Shiva, 2000], pp. 21–23.

<sup>27</sup> [Shiva, 2000] continues the oilseed case to document the harmful economic, social and environmental effects when local mustard oil was replaced by imported soybean oil.

<sup>28</sup> On the latter two, see [Shuman, 1998 and Nadeau and Thompson, 1996], respectively. Local business may take non-capitalist as well as capitalist forms, but both would be limited and supported by eco-local social capital and values.

<sup>29</sup> See [Power, 1996a], pp. 198–199 and [Hines, 2000], pp. 48–49.

<sup>30</sup> This case is taken from [McDonough and Braungart, 2002], pp. 29–30.

<sup>31</sup> For other examples of eco-local technology, see [McKibben, 1995] discussion of Curitiba, Brazil and Alan [Weisman, 1995] discussion of Gaviotas, Columbia.

<sup>32</sup> For a fuller discussion of such diseconomies, see [Sale, 1980], p. 311.

<sup>33</sup> See [Harrison, 1994], pp. 13–14 and 59.

<sup>34</sup> [Meeker-Lowry, 1995], p. 133.

<sup>35</sup> Defensive goods are purchased to mitigate the negative externalities of the consumption of other people and positional goods are goods of limited supply, such as prime real estate locations. Positional goods are zero sum goods; if you improve your welfare by purchasing one, someone else loses welfare by not being able to purchase it. See [Kohr, 1977], p. 36, [Power, 1996a] p. 212 and [Lintott, 1998].

<sup>36</sup> See [Berry, 1981], p. 122 and [Schumacher, 1989], p. 61.

<sup>37</sup> See also [Daly, 1996b], p. 149, [Hines, 2000], p. 110 and [Norberg-Hodge, 1997], pp. 4–5. Both [Sachs, 1999], p. 168 and [Barkin, 2000] (in [Harris, 2000], p. 94) illustrate the IMBY principle by discussing the environmental effects of increasing the separation of production and consumption. For an example of explicit consideration of the IMBY principle involving installation of an electrical turbine, see [Douthwaite, 1996], p. 204.

<sup>38</sup> See [Gardner, 1999 and Pretenthaler and Steininger, 1999].

<sup>39</sup> On voluntary simplicity, see [Elgin, 1993].

<sup>40</sup> See [Sachs, 1999], pp. 211–212.

<sup>41</sup> Such activities are examples of non-capitalist economics relations as discussed by [Bennholdt-Thomsen and Mies, 1999 and Gibson-Graham, 2002].

<sup>42</sup> As [Kohr, 1977] has discussed, certain products and social activities require larger than local populations and resource bases to support them. Two examples might be book publishing and symphony orchestras. They would have to be obtained on a wider, regional

basis. The point is that products should be obtained as locally as possible, particularly necessities.

<sup>43</sup> Self-reliance is thus not a prescription for isolationism; rather, it projects a different form of international and inter-regional engagement.

<sup>44</sup> Eco-localists also address the impact of trade-avoiding, self-reliant strategies on low-income developing nations. They generally conclude that self-reliance would benefit developing nations by stopping the drain of their resources and reducing both external dependence and negative externalities such as pollution, resource depletion and economic destruction of local communities. See [Norberg-Hodge et al], p. 113 and [Sale, 1980], pp. 238–240.

<sup>45</sup> [Galtung, 1986], p. 102. This is a key provision to reduce dependency on other economies.

<sup>46</sup> On this point, see also [Shuman, 1998], pp. 50–55.

<sup>47</sup> On the challenges and possibilities of eating locally, see [Gussow, 2001].

<sup>48</sup> [Power, 1996b], p. 49.

<sup>49</sup> See also [Hines, 2000 and Milani, 2000].

<sup>50</sup> See [Douthwaite, 1996], p. 50. There is an especially broad literature on localizing food and agriculture. See [Douthwaite, 1996, Gussow, 2001, Norberg-Hodge et al and Sundkvist et al].

<sup>51</sup> [Porter and van der Linde, 1995].

<sup>52</sup> See [French, 2000, Karliner, 1997 and Wallach and Sforza, 1999].

<sup>53</sup> See [Bottari, 2001, Retallack, 1997 and Wallach and Sforza, 1999] for a fuller discussion.

<sup>54</sup> See [Norberg-Hodge, 1991].

<sup>55</sup> See in particular [Douthwaite, 1996]. On the environmental effects of long distance transportation, see also [Van Veen-Groot and Njikanmp, 1999].

<sup>56</sup> Eco-localism also needs to elaborate its policy prescriptions. Some of this has already been undertaken by [Korten, 1999], [Shuman, 1998] and the *New Rules* and *Home Town Advantage* publications. Such policies are not discussed here due to the focus of this paper on the theoretical aspects of the eco-localism paradigm.

<sup>57</sup> The exception is ([Shuman, 1998], p. 55) who writes of the need to minimize the growth of the population of local communities.

<sup>58</sup> I would like to thank William Rees and an anonymous reviewer for raising this issue.

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