

INTERNALIZING ALDO LEOPOLD'S LAND ETHIC: THE COMMUNITARIAN PERSPECTIVE ON ECOLOGICAL SUSTAINABILITY AND SOCIAL POLICY

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Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. (Aldo Leopold, *A Sand County Almanac*, 1949, viii)

ABSTRACT: It is clear that environmentalists are failing in their efforts to avert a global ecological catastrophe. It is argued here that Aldo Leopold had provided the foundations for an effective environmental movement, but to develop his land ethic, it is necessary first to interpret and advance it by seeing it as a form of communitarianism, and link it to communitarian ethical and political philosophy. This synthesis can then be further developed by incorporating advanced ideas in ecology and human ecology. Overcoming the division between the sciences and humanities and granting a place to narratives as a highly developed form of eco-semiosis, these provide the foundation for a new grand narrative committed to creating an ecological civilization, a civilization organized to augment the life of ecosystems, including human ecosystems, by augmenting the conditions for its members to flourish and develop their full potential to augment life.

KEYWORDS: Aldo Leopold; Land ethic; Communitarianism; Environmental Ethics; Social Policy; Ecology; Human ecology

INTRODUCTION

It is one of the great achievements of modern civilization that we have been able to measure our progress in destroying the global ecosystem and predict the

disastrous consequences of this destruction. With a Google search, we can read histories of the scientific work that has revealed the destructive effects we are having on the life of ecosystems and easily monitor how well different countries have succeeded, or failed, in reducing greenhouse emissions, preserving local ecosystems, avoiding the extinction of species, revegetating land, and reducing the destruction of fisheries and marine ecosystems. We can easily see that, despite some local successes, globally, humanity is failing. We are moving, apparently inexorably, in the wrong direction. Advances in science and communications technology have produced a global environmental movement concerned with these issues, supported by the United Nations. By virtue of our civilization's achievements, these environmentalists now have the means to see in action from day to day how, despite some limited successes, they are failing to alter the trajectory towards a global ecological catastrophe. The ethical concerns of a huge global movement are not translating into the required effective social, economic and environmental policies and the required socio-economic transformations, despite governments setting targets to reduce greenhouse gas emissions and purporting to deal with other environmental issues. Does it have to be this way?

Social policy, insofar as it goes beyond providing the conditions for people to maximize their incomes, usually by providing the conditions for entrepreneurs and corporations to maximise their profits by extending markets, has focussed on either asserting and upholding the rights of individuals, protecting their lives and property, or maximising utility. Conforming to prevailing traditions of thought, most environmentalists have attempted either explicitly or tacitly to either utilize versions of rights theory to show that rights can be accorded to the weak, future generations, animals, species and ecosystems, or developed utilitarianism by acknowledging the utility or disutility of actions and rules of action to all people, including future generations (the greatest good [happiness] for the greatest number for the greatest length of time, as Gifford Pinchot put it) and, following Peter Singer, to animals which can experience pleasure and pain. While often seen to be opposed to each other, the imposition and extension of markets, individualist rights theory and utilitarianism have the same intellectual roots in the atomist philosophies of Thomas Hobbes and John Locke, founded on the Seventeenth Century scientific revolution.

It was Hobbes, inspired by Galileo, who characterized society as a product of a social contract and the economy as a mechanical organism driven by the

appetites and aversions of atomic individuals, with money being the equivalent of blood distributing nutrients, and it was Hobbes who reduced reasoning to calculating in the service of predicting and controlling. Locke made property rights the core of this contract, and characterized good as that which is conducive to pleasure and evil as that which is conducive to pain. John Gay, Claude Adrien Helvétius and Jeremy Bentham, elaborating on this characterization of the good, argued that the role of government is to maximise pleasure and minimize pain, using this principle to justify political action beyond the imposition of markets. Bentham's felicific calculus for choosing right action by summing up pleasures and subtracting pains evolved into cost-benefit or risk-benefit analyses, quantifying costs and benefits in monetary terms. Breaking with such thinking to some extent, Immanuel Kant extended the notion of rights to accord a place for principles of action serving to uphold the dignity of individuals as free rational beings capable of respecting the freedom of others. The notion of rights, developed by John Rawls in the Twentieth Century, building on Kant's work and defending the welfare state, competed with the Lockean notion of rights, defended forcefully by Robert Nozick. Nozick won out with the rise of neoliberalism.

The problem is that this is the philosophical and cultural framework that facilitated the disembedding of markets from communities and the subordinating of people to the logic of markets, to use the terminology of the institutionalist economist, Karl Polanyi (1957). It is a development of a tradition of thought that, in opposition to Renaissance political theorists and the Sixteenth Century Nature Enthusiasts, opposed the republicanism of the Florentines and opposed any significance being accorded to nature except insofar as it could be used or transformed to serve human purposes. This tradition of thought involved the imposition of markets where none had previously existed. It promoted a vision of society as a self-adjusting market. This involved treating land, labor and money as commodities, that is, as something produced for exchange. But as Polanyi (p.72) pointed out:

[L]abor, land, and money are obviously not commodities; the postulate that anything that is bought and sold must have been produced for sale is emphatically untrue in regard to them. ... Labor is only another name for a human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored

or mobilized; land is only another name for nature, which is not produced by man; actual money, finally, is merely a token of purchasing power which, as a rule, is not produced at all, but comes into being through the mechanism of banking or state finance. None of them is produced for sale. The commodity description of labor, land, and money is entirely fictitious.

Polanyi's contention was that (p.3) 'the idea of a self-adjusting market [incorporating these pseudo-commodities] implied a stark utopia. Such an institution could not exist for any length of time without annihilating the human and natural substance of society.'

The culture upholding this idea provided the conditions for the industrial revolution, a new kind of imperialism and the domination of the world by European civilization, endless technological development and economic growth, enormous concentrations of power, all of which have been driving the massive environmental destruction. The outcome is the exhaustion of resources, collapse of ecosystems and mass extinctions, threatening the environmental conditions for civilization, and the enslavement of most of humanity to the destructive trajectory of a globalized market based on free trade where, as the Japanese ecological economist, Kozo Mayumi (2001, 125), pointed out, any economic enterprise that is profitable is ecologically unsustainable and any economic enterprise which is ecologically sustainable is unprofitable. Scientific materialism underpinning this culture has also produced a pervasive passive nihilism that has paralysed efforts to effectively confront this crisis (Gare, 1993).

There can be no doubt that rights theory and utilitarianism have served to ameliorate some of the oppressive effects of markets, economic growth and imperialism. However, with the extension of commodification from land to labour and capital to almost everything else, including mind control through advertising, public relations and media control associated with the rise of a global corporatocracy, many of the achievements of social reformers from the Nineteenth Century onward have been dismantled. It is hardly surprising, then, that environmentalists have struggled. Figures on what has happened to the environment since the 1970s, when the limits to growth were finally recognised to be of major significance world-wide, demonstrate that the environmental movement has so-far failed. On every measure, things have got far worse. These reversals in social reform and the failure of environmentalism call for a questioning of mainstream traditions of thought.

Such questioning has been taking place. Among environmentalists, the deep ecology movement inspired by Arne Naess illustrated this, and this movement served to mobilize a wide range of previously marginalized thinkers and traditions of thought, both Western and non-Western. While serving to make their adherents feel good about themselves, such thinking has not served to effect the required radical political, social and economic changes. However, Naess's manifesto drew attention to a short work written by a forester and game keeper, Aldo Leopold, *A Sand County Almanac* (1949). Here I will suggest that Leopold's observations and the conclusions he drew from them provide a solid foundation for rethinking not only the relation between humans and the rest of nature, but also the relations between ethics, nature and public policy that could be effective.

ALDO LEOPOLD'S LAND ETHIC

Leopold's land ethic is fairly well known: 'A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.' (Leopold, 224f.) However, this is formulated at the end of a book which details how, through his work as a forester and game manager in Wisconsin, USA, he came to appreciate how biotic communities function, how the destruction of animals or introduction of new species and various agricultural practices can sicken these communities, and then how ineffectual conservation efforts have been in the past. He came to appreciate that it was the treatment of land as property that was the root cause of both the destruction of biotic communities and the failure of conservation efforts by governments. So long as the pre-eminent goal of farmers and other economic actors is profitability, conservation efforts will be weak. Appreciating this led Leopold to deep reflection on what motives people. His conclusion was that people are ethically motivated by appreciating that they are members of a community. As he put it in *A Sand County Almanac* (1949, 204):

All ethics so far evolved rest upon a single premise: threat the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to cooperate (perhaps in order that there may be a place to compete for).

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land. ...

In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-

community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.

In human history, we have learned (I hope) that the conqueror role is self-defeating.

The conqueror's role is self-defeating because conquerors assume they can fully understand what they have conquered, including who and what is worthless in community life, and they can't. Leopold aligned himself with ecologists and embraces the science of ecology, arguing that ecologists know they can never fully understand the workings of biotic communities. They are too complex. This has become evident with ecological mismanagement in USA, for instance, assuming that its ecosystems could function without wolves to control deer populations. This does not mean that ecology does not reveals anything about how biotic communities work. Leopold embraced the extension of energetics to ecology and the subsequent appreciation of trophic levels, beginning with soil, looking at how levels are built on this and then each other, up to apex species. He then called for the integration of ecology with history, arguing it is really impossible to understand history without an appreciation of the relation between human communities and their broader biotic communities. It is through such a history that we can appreciate that humans are part of a biotic team, he argued. The development of ethics and the need to expand it into a land ethic can then be understood through ecology. As Leopold (1949, 202) put it:

This extension of ethics, so far studied only by philosophers, is actually a process in ecological evolution. Its sequences may be described in ecological as well as in philosophical terms. An ethic, ecologically, is a limitation on freedom of action in the struggle for existence. An ethic, philosophically, is a differentiation of social from anti-social conduct. These are two definitions of one thing. The thing has its origin in the tendency of interdependent individuals or groups to evolve modes of co-operation. The ecologist calls these symbioses.

Politics and economics are really advanced forms of symbiosis involving cooperative mechanisms and ethical constraints, and function properly when they are appreciated as such.

Leopold noted that despite a century of propaganda, conservation had proceeded at a snail's pace. This is because people looked upon land as property. Just as Odysseus returning from the wars in Troy thought nothing of hanging a dozen slave girls on one rope because he suspected them of misbehaviour, because, after all, they were just property, so with land treated as just property,

property owners treat it as though they have no obligations to it. Change will occur when the land is recognized as a community of which people are members, Leopold argued.

THE CHALLENGE OF COMMUNITARIAN ETHICS TO INDIVIDUALIST ETHICS

Leopold's land ethic can now be recognized as a communitarian form of ethics and can be defended as such. Most ethical thought throughout history has been communitarian, assuming that individuals can only be understood as members of communities. It was only with modernity, beginning in the Seventeenth Century, that efforts to base ethics on individuals understood as ontologically independent of communities came to dominate. This is the ethical thinking associated with rights theory and utilitarianism referred to above, the ethical thinking that has failed in the face of massive ecological destruction. According to the communitarians, that is, those philosophers who in the second half of the Twentieth Century attempted to revive communitarianism, this whole tradition was a failure even on its own terms (MacIntyre, 1984). The communitarians have sought to revive ethics by returning to earlier traditions of thought associated with Ancient Greece, Republican Rome, Renaissance Italy and Nineteenth Century Germany. These have taken as their starting point in reflecting on ethics that people are first of all members of communities and could not be conceived in complete abstraction from them. As Shlomo Avineri and Avner De-Shalit (1992, 1) observed in their introduction to *Communitarianism and Individualism* (1992, 1), a major work on the debate between communitarians and individualists:

The term 'community' is not new in political thought. In fact it goes back to Greek philosophy, to Aristotle's works, through Cicero and the Roman community of law and common interests, St Augustine's community of emotional ties, Thomas Aquinas's idea of the community as a body politics, Edmund Burke's well-known concept of the community as a partnership 'not only between the living, but between those who are living, those who are dead, and those who are to be born', and the works of Rousseau in France and Hegel in Germany.

The philosophies of Aristotle and Hegel have served as the main reference points for defending communitarianism, and justice, loyalty to one's community or communities and the realization of people's potentialities tend to be the focus of communitarians rather than individual rights and utility. These do have a place in communitarianism, and it is giving a place to individual rights and concern to

cultivate the character and authentic individuality of individuals that communitarianism differs from collectivism, which tends to reduce individuals to mere instruments of the collective. As the Nineteenth Century neo-Hegelian social and political philosopher T.H. Green argued, rights are forms of recognition achieved through the advance of civilization, not the product of a primordial social or political contract between asocial individuals (Tyler, 2012, ch.6).

There are a number of facets to the arguments of the communitarians against the individualists. Apart from the intellectual incoherence of the individualists' conception of humans, one of the most basic is that, however they try, individualists are incapable of according proper value to community. Partly as a consequence of this, they are incapable of providing grounds for concern for community, or even other people, and finally, for themselves. As Søren Kierkegaard and Friedrich Nietzsche concluded, such concern is reduced to an arbitrary choice, and as such, becomes meaningless. As Nietzsche (1968, 7) put it, nihilism, this weirdest of guests stands before the door. To oppose this conclusion the communitarians argued that all reasoning, including the reasoning of individualists, presupposes that we are situated within cultural traditions. And as Josiah Royce (1924, 16ff.) argued, cultural traditions consist of socially defined causes and orientations for action that give meaning to people's lives, with the cause of the continued existence of the community and loyalty to this being primordial as the condition for everything else. We are formed as individuals, with self-consciousness and identities capable of rational thought, by the communities and their associated traditions into which we are born and then socialised. Even our capacity to critically reflect upon and challenge the causes, beliefs, values and ways of thinking embodied in these traditions only emerges through being encultured by these traditions in the first place.

To the opponents of communitarianism, this argument was seen to imply relativism, which is equally nihilistic. Even critical reflexivity could be seen as the product of particular traditions that emerged in history, not universal, and problematic for cultural health and for life. To counter this argument, Alasdair MacIntyre argued that traditions embody stories defining their goals, including stories of arguments about these goals. These stories or narratives are constitutive of these traditions, and of the individuals formed by them, of their projects and actions. They carry with them an imperative to accept at least provisionally their

implications for action and thought. As MacIntyre (1984, 216) argued:

[M]an is in his actions and practice ... essentially a story-telling animal. I can only answer the question 'What am I to do?' if I can answer the prior question 'Of what story or stories do I find myself a part?' We enter human society, that is, with one or more imputed characters - roles into which we have been drafted - and we have to learn what they are... It is through hearing stories ... that children learn or mislearn both what a child and what a parent is, what the cast of characters may be in the drama into which they have been born and what the ways of the world are. Deprive children of stories and you leave them unscripted, anxious stutterers in their actions and in their words.

In traditional societies, or in empires in which ruling elites enslaved the people they conquered and reduced them to mere instruments, there was no awareness of alternatives to these narratives (Horton, 1982), and narratives tended to be monologic, offering only one perspective as reality. However, where societies could not avoid recognizing the different perspectives of others, as in societies which consisted of diverse, interacting communities speaking the same language but without central control, people had to face up to the relativity of their own beliefs (Horton, 1982, 255). Ancient Greece was the prime example, and this condition engendered both philosophy and history as people strove to anchor their beliefs. The emergence of philosophy was associated with the quest for omni-temporal knowledge transcending any particular community. While fruitful and having continued up to the present, the quest for indubitable knowledge has failed. More importantly, Greek civilization led to the development of dialogical or dialectical narratives where different perspectives and ideas clashed and challenged each other, generating new ways of thinking through synthetic thought, facilitating the integration of insights from very different traditions of thought. The superiority of these new syntheses could be demonstrated by providing a unifying perspective from which the ideas transcended could be appreciated and their limitations revealed. Narratives facilitate making these judgements, and are required for judgments in complex situations. In doing so, their prime concern is with achieving justice, whether for perspectives, ideas, people or actions. It is in this way that narratives overcome relativism, as MacIntyre (1977, 476) pointed out:

Wherein lies the superiority of Galileo to his predecessors? The answer is that he, for the first time, enables the work of all his predecessors to be evaluated by a common set of standards. The contributions of Plato, Aristotle, the scholars at

Merton College, Oxford and Padua, the work of Copernicus himself at last all fall into place. Or to put matters in another and equivalent way: the history of late medieval science can finally be cast into a coherent narrative.... What the scientific genius, such as Galileo, achieves in his transitions, then, is not only a new way of understanding nature, but also and inseparably a new way of understanding the old sciences way of understanding... It is from the stand-point of the new science that the continuities of narrative history are re-established.

Not only philosophy and science require such narratives to advance in this way, but also mathematics. Once this is acknowledged, there can be no grounds for dismissing the cognitive claims of narratives associated with dialectical reasoning, by which traditions of ethical and political thought, and the causes to which people commit themselves, are judged (Gare, 2001; Gare, 2007). MacIntyre (1984) argued on this basis that the modern tradition of ethics, which displaced a tradition based on cultivating virtues going back to Aristotle, must be seen as a failure because it could not account for the achievements of virtue ethics, while a narrative told from the perspective of virtue ethics enables us to understand why modern ethics with its quest for universally accepted algorithms for determining morally right action, failed and had to fail.

DEVELOPING LEOPOLD'S LAND ETHIC THROUGH ECOLOGY AND HUMAN ECOLOGY

On a broader scale, such narratives are central to transculturalism, enabling societies to examine themselves critically from the perspectives of other societies with very different cultures, to learn from these cultures and inspire new syntheses of ideas (Epstein, 6off.). It has been a feature of the advance of civilization that societies have provided the conditions for people to study and appreciate other cultures, whether of other civilizations or of primitive societies, past or present. Until recently, universities had departments of French, German, Russian, or Chinese etc., along with departments of ancient history and anthropology departments. Such work inspired new developments in history transcending particular cultures and civilizations, developing the perspectives required to comprehend such diversity. The work of the Annales school of historians, most importantly, the work of Fernand Braudel integrating history and geography, and Joseph Needham's magisterial study of science and civilization in China, were major advances in developing these perspectives. Needham's work in particular

showed how such narratives made it possible to judge the achievements of different civilizations and to relate these achievements to each other, thereby justifying the perspective provided by the work of Alfred North Whitehead in terms of which this narrative was formulated and developed (Gare, 1995).

Being more civilized involves not only understanding and learning from this diversity, but also having respect for other cultures, even when this respect is not reciprocated. For instance, the experience of the land by some of the most primitive people, Australian Aboriginals, has come to be appreciated as a counterpoint to the enslavement of the land by colonists who treated it as mere property. Aboriginals, who had never practiced slavery and only engaged in minimal trade, regarded themselves as belonging to the land, not as possessors of it. Studying such cultures enables us to understand what it meant for people to experience themselves as part of a biotic community, and to better understand the brutal side of civilizations associated with the creation of indebtedness, the enslavement of others and the development of money, which, as Graeber (2011) showed, followed the development of slavery, the treatment of people and then land as property. These were the foundations for the subsequent expansion of markets, the creation of a proletariat, global imperialism, and then the progressive commodification of almost everything deemed to be of value (Gudeman, 2010). However, it is impossible for members of modern civilizations to simply return to the forms of life and perspective of hunter-gatherers. Rather, the sense of belonging to a biotic community is an aspect of a way of experiencing the world that needs to be recovered and incorporated into world-history to illuminate the nature of enslavement, markets, imperialism, and the tendency to reification associated with abstract forms of knowledge where abstractions are taken as concrete reality. The study of such societies highlights the drawbacks as well as the achievements of civilization, and thereby helps provide a goal to aim at, a social order free of alienation.

The land ethic called for by Leopold can be seen as a recovery of what had been lost when humans ceased being hunter-gatherers. From a modern communitarian perspective, acknowledging the centrality of narratives to community, this appreciation needs to be seen in the context of a narrative of human history, taking into account both the brutality, destructiveness as well as the advances in the humanity of people in civilizations up to the present (Wolf, 1982). Such history should acknowledge the destruction, continuing up to the

present, of people without such historical perspectives, such as the indigenous populations of Amazonia, who nevertheless continue to live in a way that is ecologically superior to modern forms of life that are threatening their existence. At the same time historians should also acknowledge that the development of history, philosophy, mathematics and science are major achievements of civilization. As noted, it is by virtue of these advances that we now understand the destructive effects of greenhouse emissions and can view on the internet how we are failing to check ecological destruction. Leopold aligned his land ethic with ecology, and further advances in theoretical ecology support his judgement in this respect. It has been argued by Robert Ulanowicz (1997) that ecology should now be recognized as the most advanced science, developing the forms of thinking that all other sciences, including physics, will have to appropriate. The development of ecology and human ecology, and the incorporation of human ecology and the advances in science on which it is based into history, overcomes the reductionism of scientific materialism and its associated nihilism and offers a way of appreciating traditional societies and their cultures, along with ecosystems and other life forms, through the highest cultural developments of modern civilization.

The most important advances in ecology since Leopold wrote have been developments in thermodynamics, the emergence of complexity theory, including hierarchy theory, and bio- and eco-semiotics (Gare, 2002). These in turn have facilitated the advance of human ecology, recognizing that human culture is an emergent form of semiotics grounded in and built on biosemiotics (Gare, 2019). From the perspective of advanced thermodynamics, living beings, ecosystems, human communities, societies and civilizations are particular kinds of dissipative structures, transforming exergy into entropy, but doing so in a way that preserves and develops the forms of these energetic processes. The capacity to do so is associated with the emergence of hierarchies of self-reproducing constraints. As Howard Pattee (1973, 73f.), a leading hierarchy theorist and theoretical biologist wrote:

The constraints of the genetic code on ordinary chemistry make possible the diversity of living forms. At the next level, the additional constraints of genetic suppressors make possible the integrated development of functional organs and multicellular individuals. At the highest levels of control we know that legal constraints are necessary to establish a free society, and constraints of spelling and

syntax are prerequisites for free expression of thought.

These constraints introduce final causes into nature in which organisms have models of themselves, which in turn is associated with the emergence of semiosis – the production and interpretation of signs (Gare, 2019). Organisms are anticipatory systems responding to anticipated future states by differentiating themselves from their ambiance or environment and interpreting their environments as signs, to which they then respond. As Jacob von Uexküll argued, living organisms can only be understood in the context of their surrounding worlds, or *Umwelten*. Their environments become their worlds which have meaning for them, and they respond accordingly to preserve and develop themselves. With this self-concern emerges the first glimmerings of subjectivity. Semiosis facilitates communication between organisms so that their interactions are organized by semiotic constraints. As Kalevi Kull (2010a, 44) points out, ‘Uexküll saw as a major task of his scientific approach to describe the multispecies community of organisms on the basis of relations between *Umwelten* of different species of organisms’. He was particularly interested in the relations the organisms have between each other. Developing this research, Kull argued that ‘The bonds of ecosystems are semiotic bonds’ (2010b). Such semiotic constraints are central to symbiosis by which biotic communities develop and act in a way that augments the environmental conditions for these communities. Eukaryotic cells and multi-celled organisms are themselves highly integrated ecosystems in which components are not destroyed but function symbiotically through semiotic constraints. Ecosystems are ‘ecopoietic’, that is, they produce the ‘homes’ or niches for their components, which then participate in this ecopoiesis. Ecosystems evolve by providing new niches for components, which in establishing themselves and developing, contribute to or undermine the resilience of these biotic communities, surviving best when they augment the conditions for these communities and their members and facilitate the emergence of new levels of constraints that provide the niches for the establishment and development of new components. As Peter Corning (2003) argued, evolutionary progress takes place through new synergies emerging between diverse components of ecosystems. Ecosystems exist at multiple levels and are best thought of as communities of communities, with components themselves being ecosystems of diverse components.

Semiosis itself has evolved from the vegetive semiosis of plants where the interpretant is growth into particular forms, to animal semiosis where the interpretant is action, to human culture where semiosis is dissociated from immediate action and takes the form of symbolic action (Deacon, 1997; Kull, 2009), a process whereby, as Jesper Hoffmeyer (1996, xiii) put it, natural history became cultural history, in which 'swarming cells finally ... turn into thought swarms within human being who [know] how to talk to one another and could differentiate between good and evil.' With symbolic semiosis, people can see the world and themselves from the perspectives of others, generating the struggle for mutual recognition and the quest for objective understanding as central to human existence. 'Objects' can be perceived or imagined as hypothetical entities or as totally unreal.

This opens up new possibilities, but new levels of semiotic distortion and deception are also made possible. 'Objects' in the 'external worlds' of humans include 'self' and communities, artifacts and buildings, institutions and organizations, money, nation-states, texts, ideals and imaginary worlds created by art, mathematics, science, and other such entities that only exist as social realities through being symbolically signified. The symbolic dimension of semiosis facilitates greater reflexivity on semiosis and signs, engendering the highly developed capacity of humans to see the world from the perspective of others, to experience themselves as subjects with perspectives on their world shared with others, and to reflect upon themselves and their own and others' beliefs. Above all, symbolic semiosis involves the capacity to create, embrace and live out, and then question and refigure narratives, with all this entails, including the capacity through achieving narrative identity and to define reality through stories, to project goals and organize and cooperate on a massive scale, forming new enduring communities involving new synergies and effecting major transformations of their physical and biological environments. By virtue of these characteristics, however, humans are prone to generating emergent forms that take on a life of their own, for instance, the tendencies of markets to expand and then corrupt communities, the tendencies of organizations to bureaucratisation, and the tendencies of civilizations to decadence.

Human ecology situates humans as complex dissipative structures feeding on negative entropy and dissipating entropy while being complex anticipatory

systems having evolved within broader biotic communities characterized by vegetative and animal semiosis, but also having all these specifically human dimensions made possible by symbolic semiosis.

SOCIAL POLICY, ECOLOGICAL NARRATIVES AND THE LAND ETHIC

The dominant traditions of thought are based on abstractions that have denied the internal relations not only between individuals and their communities, but between humans and the biotic communities from which they evolved and in which they are participating. Invoking markets as a solution to problems reinforces the domination of people by market forces driven by the quest to maximise profits, further dis-embedding markets from communities and commodifying land, people's lives and the instruments of exploitation. This continues to facilitate massive concentration of power and wealth both within and between countries. It devalues community and life and has facilitated the despotic rule by the global corporatocracy, strengthening a world order that is destroying the global ecosystem. Cost-benefit analyses reinforce the tendency to bureaucratization in society, putting power to make decisions in the hands of experts, who now tend to serve the corporatocracy. Assertion of rights can also be problematic. When overused, it tends to promote a decadent individualism asserting rights without obligations that further undermines communities, including the power of communities to resist domination.

Institutionalist economics, giving a place to the study of institutions and how they relate to each other, and how markets can be controlled, is aligned with communitarian perspectives and does acknowledge that institutions are products and components of communities, while ecological economics recognizes that humans are part of nature with all the limits implied by this, and that land should not be treated as just a commodity. When integrated, as in the work of Arild Vatn (2005), institutionalist and ecological economics go a long way to overcoming the deficiencies of mainstream thought about society and its relation to the rest of nature. Such work was used by Vatn to formulate economic and environmental policies. However, to defend such institutionalist ecological economics and to really make community central, to overcome the fragmentation of intellectual life engendered by disciplinary boundaries and to facilitate the analysis of the relationship between economics, politics, culture and other dimensions of society, and to see all this in the context of the human and broader biotic communities

within which humans are participating and co-evolving, it is necessary to invoke human ecology (Gare, 2017, 179ff.). Human ecology, incorporating hierarchy theory and ecosemiotics and recognizing the importance of diversity for the creation of new synergies, functions as a transdiscipline, enabling other disciplines, including history, geography, economics and sociology, to be understood in relation to each other. As illustrated by the work of ecologists and human ecologists such as Stanley Salthe (1993), Timothy Allen et.al. (2002), Richard Norgaard (1994), Berkes, Colding & Folke (2003), Peter Corning (2003) and Alf Hornborg (2019), human ecology puts in perspective the complex relations between the energetics and semiotics of ecosystems, human communities and their cultures, their built-up environments and institutions, markets, money, technology, and destructive exploitation. It reveals the destructive consequences of the current world-system organized to facilitate the exploitation of the resources of the peripheries of the world economy by the core zones.

Human ecology reveals even more clearly than ecological economics why it is necessary to oppose the globalization of the economy, to reject free trade and to develop local economies with local currencies insulated from broader markets, while still giving a place to some broader markets. It enables us to revision progress as movement towards a 'patchwork quilt' of co-evolving cultures, communities and economies, as Norgaard (1994, ch.14 & 15) called for. It also provides the perspective needed not only to uphold the value of communities, but to reinforce the feeling of belonging to these communities and to foster the virtues required for their defence and survival, while at the same time, revealing why it has been so difficult with the civilization of modernity to internalize the quest for justice for animals and ecosystems in the quest for social sustainability in social policy. The role of ecosemiotics in achieving this has been explained by Tønnessen (2021). Human ecology provides an alternative theoretical framework for formulating public policy with the potential to achieve this internalization (Gare, 2002).

Invoking the perspective of human ecology is not just a matter of interpreting the world and ourselves. It is not merely a matter of seeing humans from a communitarian perspective. It is to challenge the concepts or categories through which people currently define their place in the world, their relations to each

other and to nature. For the most part, at least where social policy is concerned, people at present define the world and themselves through the categories of mainstream economics, the 'forms of being' as Karl Marx characterized them. Human ecology has the potential of offering alternatives (Gare, 2002). To begin with, human ecology affirms the reality not only of human communities but the broader biotic communities of which we are part, and enables us to evaluate these communities, ourselves and our relationship to them, and our sense of place in these communities. But more than this, in interpreting our place in the world through human ecology, utilizing the concepts provided by it or are being developed, we are participating in creating these communities, including the culture and concepts which help constitute these communities. Redefining who we are and what is our relation to nature, it changes us, our relation to the world and thereby the world itself. As Roy Rappaport pointed out:

In a world in which the lawful and the meaningful, the discovered and the constructed, are inseparable the concept of ecosystem is not simply a theoretical framework within which the world can be analyzed. It is itself an element of the world, one that is crucial in maintaining that world's integrity in the face of mounting insults to it. To put this a little differently, the concept of the ecosystem is not simply descriptive ... It is also 'performative'; the ecosystem concept and actions informed by it are part of the world's means for maintaining, if not indeed constructing, ecosystems. (Rappaport 1990, p.68f.)

Human ecology can reorient us in action by enabling us to recognize and commit ourselves to the communities of which we are part, in so doing, strengthening these communities, and also the claims these communities have on us. To experience the world from the perspective of human ecology, interpreting each situation and ourselves through this perspective, is to internalize the significance of animals and ecosystems, including human communities and their built-up environments, in the policies, projects and actions to which we commit ourselves.

To deploy human ecology this way, it is necessary to utilize narratives. As MacIntyre argued, we normally orient ourselves through stories. Stories uphold causes for people to commit themselves to and they are orientations for action. Any complex human action, especially involving a number of people, involves formulating and telling a story of this action by which actors understand what causes are worth committing to, what are their goals and how particular goals

relate to the actions and goals of other actors and the broader causes, actions and goals with which all the actors are engaged. By relating actions and actors to each other, narratives define and integrate communities, including the beliefs and commitment to causes constituting these communities. As Richard Norgaard (1994, 181f.) observed: ‘Every culture has a life story ... Shared life stories place people in their physical and biological surroundings, connect them to their ancestors and descendants, remind them of their obligations and vulnerability, and escort their daily thoughts and behaviour.’ It is through embracing the stories of one’s communities that one develops loyalty to these communities. If human ecology is to be inclusive, it must acknowledge the crucial importance of these stories or narratives. Narratives in turn, understood through biosemiotics and human ecology, can provide support for human ecology by extending it, recognizing the historical dimension of ecosystems, small and large, upholding a form of naturalism that recognizes the unique potential of humans to define and organize themselves through stories, and then to develop more abstract forms of thinking associated with science and mathematics (Gare, 2007).

In fact stories can encompass the history of the entire cosmos, including the history of the formation of the solar system, of the emergence of life on Earth, of the evolution of life and complexes of ecosystems to engender humanity, complex societies and civilizations with their advanced cultures, and of people constructing these stories. When living beings are understood non-reductionistically through biosemiotics, the intrinsic significance of plants, animals and ecosystems can be appreciated along with human communities, societies, civilizations and individual people. This becomes evident when reading works such as Peter Wohlleben’s *The Hidden Life of Trees* (2016), revealing how they feel, communicate and cooperate. Stories, formulated from the perspective of human ecology, can encompass and accord recognition and appreciation of the culture and forms of life of people who do not share or even know about the stories through which they and their forms of life are interpreted. For instance, the culture and forms of life of indigenous Amazonians, can be defended from the perspective of human ecology for having augmented their biotic communities, while people of European descent organized into a global system of exploitation, who are destroying these biotic communities, can be more effectively challenged, as they have been by Stephen Bunker (1988) and Richard

Norgaard (1994). Such narratives can also encompass and acknowledge the significance of the semiosis and lives of non-human organisms, including plants and cells as participants in biotic communities.

There is an alternative to current ways of formulating policies which augment rather than undermine the role of stories in communities. This is retrospective path analysis. As developed by Cliff Hooker, retrospective path analysis consists in firstly, the selection of macro-economic goals by considering a variety of end-points forty to fifty years in the future, and then secondly, examining various paths to the desired future state. However there is no reason why this cannot be extended to considering goals for the whole of civilization several centuries into the future, for instance, creating a global ecological civilization organized to augment the life of the ecosystems, including the global ecosystem, and working out the required sub-goals for achieving these. This procedure departs from the normal approach in calculating a course of action retrospectively from some future date, specifying 'those key transitions in social structure and functioning generally which, taken in proper sequence, will lead from the present to the desired future social condition' (Hooker, 1982, 17). This procedure focuses attention on the conditions necessary for achieving the desired future states, on the tendencies inimical to their realization, and on the crucial societal decisions at the branchpoints of different possible paths of development. Clearly this is accords with the structure of stories, and fits easily with the way people normally form projects and then act to realize these. Further developments of the narrative approach to policy formation have been made by Emory Roe (1994).

Stories always assume a context as well as component agents and actions. They allow for rival projects and rival storylines, and grant a place to reflexivity. As far as the narrative of any community is concerned, the ultimate long-term project is the continued viability of the community. One could think of this viability as its sustainability, but usually, sustainability only becomes a focus in crisis situations. Viability is more generally understood as the health of the community, associated with its resilience in the face of perturbations, attacks or disease. A resilient community is a healthier and more alive community, and it has been argued that what we perceive as beautiful is what is more alive or conducive to life in this sense. Communities are resilient when they augment each other's health, whether their component communities or the broader

communities of which they are part, and stories can acknowledge a multiplicity of co-evolving communities or communities of communities. The stories of more primitive societies generally acknowledged this, but as Norgaard (1994, 182) noted, the 'Judeo-Christian-Islamic religions introduced a life story ... [which] came to be interpreted as a grand design. A single God came to be interpreted as having given people dominion over all. It is an atomistic and hierarchical story with clear dominance and vague responsibilities.' From a Bakhtinian perspective, this life story became a monological grand narrative reducing everyone and everything to instruments to achieve the final end, whether this be the destruction of the world in a final conflagration or its total technological control (Gare, 1996). However, it is possible and necessary with the help of human ecology to construct a dialogic grand narrative of ecological civilization, able to grant a place to all these communities and relations between them and inspire people to embrace all these different levels, promoting concern for justice at all levels of community, promoting life as the ultimate value of civilization. The commitment to justice, as giving life, people and all living beings their due, is implicit in stories, and as such, is the foundation of communities and, as MacIntyre (1983, 244), upholding a claim by Aristotle, argued, is the first virtue of political life.

It is through this commitment to justice within communities that solidarity is achieved and maintained. With a dialogic grand narrative, it should be possible to achieve this solidarity with the whole of humanity and with the global community of life on Earth, not just as an idea but incorporated into practices and forms of life, consistent with achieving this solidarity at more local levels and mobilizing communities at every level to combat the threats to the life of these communities coming from whatever level. This will involve a multileveled federalism, achieving organized decentralization of power and protecting the means to achieve and maintain this decentralization. The work of Vandana Shiva in India promoting earth democracy and reviving traditional forms of agriculture, the promoters and practitioners of ecological civilization in China, at the local level those reclaiming the Gobi desert, and in the West, the defence of agricultural communities committed to farming in a way that sustains both rural communities and ecosystems, illustrate such reorientations taking place. Transition towns, committed to zero greenhouse gas emissions, are the latest

development in this regard. In each case, the greatest threat comes from transnational agribusiness companies, supported by governments, defining land as nothing but a commodity and motivated purely by the quest for profit (Lawrence, 1987; Cobb & Daly, 1994, ch.13 & 14; Douthwaite, 1996; Douthwaite & Fallon, 2011).

The commitment to justice can also involve appreciating the value of institutions and ways of thinking, which while having destructive tendencies, have also been productive. Markets, and even military conflicts, have facilitated great creativity and the capacity to coordinate people's activities, as Peter Turchin (2016) has argued. Any future society is unlikely to survive without some markets, and state institutions, developed through a long history of wars, are required to coordinate activity. To do them justice, they need to be given a place, but re-embedded in communities and made to serve them. As David Miller (1989) argued, in the modern world we need market socialism. Such market socialism needs to acknowledge national communities as well as more local and broader, international communities. There should also be some place for cost-benefit analyses, but always understood and ultimately judged through and subordinated to narratives of communities which define their goals. The institutionalization of rights should also be recognized as important for the advance of civilization, provided these rights are understood, as T.H. Green, argued, as institutional achievements of communities. Markets, and utilitarian and rights claims, should always be subordinated to and understood in relation to the quest for justice within communities, institutionalized as the proper recognition of the significance of all beings or the means for achieving this recognition. Such institutionalized recognition developed first of all in countries, associated with the institutions of states. The concern with justice as proper recognition, originating in small communities such as the Ancient Greek city states eventually inspired the creation of a global community as a community of communities, institutionalizing recognition of all such communities, most importantly, through the United Nations and its subordinate institutions. These have been committed to augmenting the health of their member communities, from major regions, to nations, to local communities, and the various institutions and organizations that serve them. The global ecological crisis is forcing people to extend concern with justice and the associated sense of community not only to the whole of humanity

but to all living beings on Earth as members of the global ecosystem, the semiosphere, or as James Lovelock (1991) called it, *Gaia*. This can now be understood as a global ecological civilization (Gare, 2017). Aldo Leopold's land ethic is of necessity becoming a real force, and the struggle now is to institutionalize it from the local to the global level, to embody it in our sense of who we are and what is our relationship to the land in our everyday practices and in the functioning of all societies' institutions, from the local to the global.

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