ETHICS, PHILOSOPHY AND THE ENVIRONMENT

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ABSTRACT: Educated people everywhere now acknowledge that ecological destruction is threatening the future of civilization. While philosophers have concerned themselves with environmental problems, they appear to offer little to deal with this crisis. Despite this, I will argue that philosophy, and ethics, are absolutely crucial to overcoming this crisis. Philosophy has to recover its grand ambitions to achieve a comprehensive understanding of nature and the place of humanity within it, and ethics needs to be centrally concerned with the virtues required to create and then sustain economic, social and political formations that augment the life of ecological communities. Achieving these ends will involve reviving speculative philosophy and its quest to forge a synthesis of natural philosophy, history and art to enable humanity to redefine its place in the world, both collectively and as individuals, in very practical ways. Such a synthesis is required to oppose the corrosion of democracy and to revive the virtues of citizenship and the sense of responsibility citizenship entails, but more fundamentally and intimately related to such citizenship, to oppose managerialism and the proletarianization of the workforce and to revive workmanship and professionalism as the foundations of not only economic life, but social and political life.

KEYWORDS: Ecological ethics; Environmental movement; Speculative naturalism; Process metaphysics; Work; Democracy; Christopher Alexander

Ulrich Beck, a German sociologist, observed in Risk, Environment & Modernity, a book published in 1996:

The transformation of the unseen side-effects of industrial production into global ecological trouble spots is … not at all a problem of the world surrounding us – not a so-called ‘environmental problem’ – but a far-reaching institutional crisis of industrial society itself. … What previously appeared ‘functional’ and ‘rational’ now becomes and appears to be a threat to life, and therefore produces and legitimates dysfunctionality and irrationality. … Just as earlier generations lived in the age of the stagecoach, so we now and in future are living in the hazardous age
of creeping catastrophe. What generations before us discovered despite resistance, and had to shout out loud at the world, we have come to take for granted: the impending ‘suicide of the species.’

Despite growing awareness and concern with environmental problems, and some gestures towards cutting greenhouse gas emissions, there has been no significant change to this condition. As William Ripple and seven other authors, representing 13,364 scientists from 184 countries, put it in ‘World Scientists’ Warning to Humanity: Second Notice’ in December, 2017:

Since 1992, with the exception of stabilizing the stratospheric ozone layer, humanity has failed to make sufficient progress in generally solving these foreseen environmental challenges, and alarmingly, most of them are getting far worse (figure 1, file S1). Especially troubling is the current trajectory of potentially catastrophic climate change due to rising GHGs from burning fossil fuels (Hansen et al. 2013), deforestation (Keenan et al. 2015), and agricultural production—particularly from farming ruminants for meat consumption (Ripple et al. 2014). Moreover, we have unleashed a mass extinction event, the sixth in roughly 540 million years, wherein many current life forms could be annihilated or at least committed to extinction by the end of this century.

The United Nations Emission Gap Report 2018 published in November, 2018, noted that greenhouse gas emissions increased in 2017, after three years of stagnation. In the face of this, what role could ethics and philosophy play? Beck himself suggested that, in the face of this crisis, morality is ‘like a bicycle brake on an international jet.’ It is irrelevant. The same claim could be made of philosophy. Despite a large number of publications, including several specialist journals in environmental philosophy, ecological problems are now seen primarily as technical problems to be solved by technology and markets, with the main driving force being the quest by corporations to maximize their profits, even though it is clear that technological advances driven by the quest for profits have up until now been the main driving force for ecological destruction. The vast majority of the population has absolved themselves from taking responsibility for the future.

There are a number of reasons why this should be the case. The most important is the power structure of the global economic and political order. The globalization of the

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the economy has disempowered the vast majority of the world's population while massively concentrating power in the hands of people who have a vested interest in perpetuating the existing system, along with its destructive dynamics. This is an order in which the dominant States vie with each other for power within the world system to control resources by promoting the growth of their economies, most importantly, by promoting free markets and allowing these to determine the direction their societies take. Transnational corporations which have been empowered within this system, have been supported ideologically by a global network of neoliberal think tanks promoting neo-classical economics and free markets. With this ideological support, these corporations have been able to use their power to free themselves from control by democratic States and then to manipulate and control these States, undermining remnants of democracy, forcing countries to compete with each other for their investment, extracting their wealth while turning State institutions into instruments for their own expansion. Capital has been moved to where-ever labor is cheapest, the workforce most effectively subjugated and regulations most lax. Change has been so rapid that it is difficult for anyone to comprehend what is taking place. The majority of the world's population is struggling to maintain their position within this economy to survive and is in no position to concern itself with the environmental sustainability of civilization. The only freedom most of them have is in what they choose to buy and consume. And since the role through which they now define themselves is that of consumers, they also have a vested interest in furthering the expansion of the economy to augment their buying power.

With this state of affairs, Ulrich Beck's comparison of morality to a bicycle brake on an international jet appears apposite, and if this is the case, isn't philosophy also irrelevant?

Philosophy cannot be dismissed so easily. Nietzsche defined philosophers as physicians of culture. If our culture is such that humanity is on a path to a global eco-catastrophe, and people are not making the required effort to deal with this, or to even comprehend it, then our culture is fundamentally diseased. At no time in history has philosophy been more important.

Most importantly, it is incumbent on philosophers to put all the problems, including the failure to deal with problems, in perspective. Academics are not doing this. Most academics accept the existence of 4000 discipline areas, and are happy to carve out new subdisciplines alongside these on the basis of which they can forge their academic careers. Philosophers have fallen in with this trend. So we have environmental ethics as a sub-discipline of ethics, which is a sub-discipline of philosophy. As such, environmental ethics is often dissociated from political and social
philosophy, which these in turn usually ignore the rise of economics and the new ‘discipline’ of public policy studies which have displaced them when it comes to influencing political decision-making and defining the goals of society.

**FRAGMENTATION OF WORK AND THE DECAY OF ETHICS**

This pathological state of academia is a manifestation of a more general problem, the fragmentation of economic and social life. This problem was identified by the nuclear physicist, Max Born. Reflecting on the First and Second World Wars, the holocaust and the Cold War, Born was concerned with the paradox that technological progress had led to greater brutality and greater threats to humanity. He argued that this was due to the fragmentation of work, undermining people’s capacity to think about their relationship to the rest of society or to put themselves and their actions in broader perspective. Reflecting on the past, Born noted how there was a sameness to human history, with peace alternating with war, construction with destruction, growth with decline. Then suddenly, three hundred years ago, modern science and technology were born. While due to the mind, the advance of science and technology is not controlled by the mind. Advances in medicine have extended life, but resulted in catastrophic overpopulation. People crowded in cities have lost all contact with nature. Wild life is vanishing. Advances in communications technology have resulted in every little crisis in the world affecting everywhere else, making reasonable politics impossible. However, Born argued that these are problems that could be addressed. He continued:

> The real disease lies deeper. It consists in the breakdown of all ethical principles which have evolved in the course of history and preserved a way of life worth living even through periods of ferocious warfare and wholesale destruction. … In peace, hard work was the foundation of society. A man was proud of what he had learned to do and of the things he produced with his hands. Skill and application were highly valued. Today there is little left of this. Machines and automation have degraded human work and destroyed dignity. Today its purpose and reward are money. The money is wanted for buying technical products produced by others for the sake of money. … Modern weapons of mass destruction leave no place for ethical restrictions and reduce the soldier to a technical killer. The devaluation of ethics is due to the length and complication of the path between a human action and its final effect. Most workmen know only their special tiny manipulation in a special section of the production process and hardly ever see the complete product. Naturally they do not feel responsible for this product, or for its use. … The most horrid result of this separation of action and effect was the annihilation of millions of human beings during the Nazi regime in Germany:
the Eichmann type of killers pleaded not guilty because they “did their job” and had nothing to do with its ultimate purpose.4

This fragmentation has accelerated with what the sociologist Zygmunt Bauman in a series of brilliant books has analysed as the condition of ‘liquid modernity’. This is what underlies not only the global ecological crisis but the triumph of the new global ruling class of corporate managers and the subjugation of people and nations to them, the precarization of work and concomitantly, ‘moral blindness’.5 Just as individuals who were involved in each small step of the process by which millions of people were exterminated in death camps during the Second World War saw themselves as merely getting on in life by doing their job, myriads of people leading their normal daily lives, struggling to maintain their positions in the economy and society, are taking the small steps leading inexorably to global environmental destruction.

If environmental ethics is to be efficacious, this is the problem that must be confronted, and for the most part, it has not been confronted.

RECOVERING PHILOSOPHY’S VOCATION

That there is a major crisis in philosophy has been well understood by philosophers for some time, and many have responded. This has involved re-examination of the history of philosophy, including analytic philosophy, efforts to revive Aristotle, Aquinas, Hegel, to revive John Dewey’s vision for philosophy, engagement with recent ‘continental’ philosophers, and efforts to re-examine and revive Kant and neo-Kantianism. Other philosophers have argued that the only way to overcome the crisis is to reject analytic philosophy and return to a form of philosophy grounded squarely in the humanities, defending phenomenology or hermeneutics.

However, none of these efforts has got to the root of the problem more successfully than C.D. Broad, a leading British philosopher whose career coincided with the eclipse of speculative philosophy by what he called ‘critical’ philosophy, which we would now equate with analytic philosophy, in two famous papers, the first published in 1924, the second in 1947. In the 1924 paper, ‘Critical and Speculative Philosophy’, Broad characterized critical philosophy (which evolved into analytic philosophy) as analysis and clarification of the basic concepts and presuppositions of ordinary life and of science. It was assumed by its proponents that philosophical problems could be treated and dealt with in isolation from each other, and that philosophy, like science, could

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4 Max Born, My Life and Views, New York: Charles Scribner’s Sons, 1968, p.52f.
accumulate indubitable knowledge. On the other hand, speculative philosophers attempt to arrive at an overall conception of the nature of the universe and the position within it of human beings by taking into account the whole range of human experience—scientific, social, ethical, aesthetic, and religious: ‘Its business is to take over all aspects of human experience, to reflect upon them, and to try to think out a view of Reality as a whole which shall do justice to all of them.’

Returning to the problem of the eclipse of speculative philosophy in 1947, in ‘Some Methods of Speculative Philosophy’, Broad characterized three methods used by philosophers generally that define them as such. These are ‘analysis’ (which had come to completely dominate, and which he did not bother to describe any further), ‘synopsis’ (whereby the inconsistencies between various normally separate domains of experience are confronted – ‘synopsis’ means ‘view together’) and uniquely to speculative philosophers, ‘synthesis’, which aims to ‘supply a set of concepts and principles which shall cover satisfactorily all the various regions of fact which are being viewed synoptically.’ It is important to note that speculative philosophers must use all three methods, analytic philosophers only the first two, with a greatly reduced role accorded to synopsis. Analytic philosophers tend to give less place to synopses and ignore or downplay the significance of the contradictory assumptions of different domains of life and experience because they do not take seriously the synoptic overviews (often involving narratives that are themselves a form of synthetic thinking) that are required to reveal these contradictions, and they deny validity to the synthetic forms of reasoning required to develop new conceptual frameworks that could transcend these contradictions.

This is what is required to provide the means for people to comprehend the effects of their actions. This requires the transcendence of fragmenting perspectives, a re-linking of ethics and political philosophy, of philosophy with the rest of culture, including the arts, the humanities, the sciences, technology and the culture of everyday life, and of each of these with each other in a way that would be easily comprehensible to the general public. Is this even possible?

THE TRADITION OF SPECULATIVE NATURALISM

In fact it is not only possible, there has been a whole tradition of philosophy that

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emerged in reaction to both the scientific materialism bequeathed by the Seventeenth Century scientific revolution and its elaboration in the Eighteenth Century, and the Idealist reaction to this, a tradition of natural philosophy, and more specifically, of speculative naturalism that has had an enormous influence on the sciences. Its most prominent originators were Herder, Goethe and Schelling, although each of these looked back to Giordano Bruno, Spinoza, Leibniz and Kant. Schelling, a crucial figure in this tradition, defined his own work as overcoming the opposition between idealism and realism, spiritualism and materialism. This tradition was revived in the late nineteenth and early twentieth century by C.S. Peirce, Henri Bergson, Aleksandr Bogdanov and Alfred North Whitehead. It is currently being revived again as the tradition of the more radical forms of complexity theory, Peircian biosemiotics and, uniting these, process metaphysics. Its proponents claim, with some justification, that only this tradition has the potential for conceiving humans as conscious beings and agents as part of and within the context of the autonomous dynamics of nature and society, while revealing the intrinsic value of all life, human and non-human.

Most importantly, this tradition provides the basis for overcoming the opposition between the sciences and the humanities. While Isabelle Stengers and Ilya Prigogine are most well known for promoting this on the basis of developments in thermodynamics, it has been most vigorously promoted in biosemiotics, ecology and eco-semiotics, with Jesper Hoffmeyer and Kalevi Kull being the leading figures in this movement. Through this tradition, the place and cognitive claims of narratives can be defended as a form of semiosis in nature, while it provides the metaphysical foundations for a form of science that makes intelligible the emergence of human beings who can understand and orient themselves through narratives. The importance of this for ethics is immense. As Alasdair MacIntyre, David Carr and others have argued, life is lived as narratives, before narratives are told. It is through narratives that we learn how to live. As MacIntyre famously put it,

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 in order to be able to understand how others respond to us and how our responses to them are apt to

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be construed. ... Deprive children of stories and you leave them unscripted, anxious stutterers in their actions and in their words.10

Particular actions, individuals, roles, institutions, communities and civilizations are related to each other through narratives. It is by configuring new narratives and refiguring the narratives that people are living out that they change the way they live and transform their institutions, their societies and their civilizations.

The provision of a metaphysics able to reconcile the sciences and the humanities, legitimating this role of narratives while providing the perspective from which such narratives could be configured, and could provide the basis for a new grand narrative to overcome the global ecological crisis.11 To achieve this it should provide the perspective from which the achievements, failures, tendencies and potentialities of humanity, ranging from civilizations and nations to specific institutions and individuals, could be comprehended and re-evaluated. This in turn could orient people to interrogate and reconfigure the narratives they are living out, orienting them to take their place in history and to take responsibility for creating the future. This is an essential condition for mobilizing people for overcoming the problems facing humanity while deploying the concepts to create a social, political and economic order that in practice could augment rather than undermine the environmental conditions of humanity’s existence.

However, something more is required. It is necessary to mobilize people to aspire to achieve such a comprehensive understanding of their place in history and in nature. The corrosion of ethics that Born diagnosed has advanced considerably since he wrote in the 1960s. Born wrote before the triumph and domination of the world by ‘neoliberalism’ (really, managerialist market fundamentalism) and the global corporatocracy. The idea that the end of life is the quest for money to buy and consume more, is all pervasive and has come to be identified with freedom and democracy, even as real incomes of most people have been falling and they have been losing their security of employment. Concomitantly, there has been a decay of interest in any other form of knowledge than how to control things and people in order to increase profits. This has led to a transformation in how education is understood and to a transformation of educational institutions.12 Education is now an investment and universities are run as transnational business enterprises selling training and credentials promising to augment their customers’ earning power. How can this trend be reversed?

ECOLOGICAL ETHICS AND DEMOCRACY

Essentially, what we are seeing with the corrosion of ethics and the rise of consumerism is a decay of genuine democracy. This itself is partly a result of the tendencies identified by Born towards more specialization and greater global interconnectedness, rendering reasonable politics impossible. As people feel powerless they take less interest in politics, less interest in history and less interest in cosmology. As Cornelius Castoriadis, reflecting on the Ancient Greeks, noted, it is only with democracy where people began to take responsibility for their society and for the creation of the future that history and philosophy become centrally important.\footnote{Cornelius Castoriadis, ‘The Greek Polis and the Creation of Democracy’ in \textit{Philosophy, Politics, Autonomy: Essays in Political Philosophy}. New York: Oxford University Press, 1991.}

However, the loss of interest in these by the general public renders them more powerlessness. It is in these circumstances that people have come to define and identify themselves almost completely though what they consume. And if people see themselves primarily as consumers, then, as noted earlier, what they are most interested in is getting more money and getting more for their money. Such an identity is inimical to facing up to the broader problems of society and humanity and the means to do so.

This was the conclusion that has been reached by Pruh, Costanza and Daly, who drew the further conclusion that the notion of what it is to be a citizen has to be strengthened in order to get people to think about the broader problems of their societies. As they noted:

\begin{quote}
The citizen preference orientation is currently attenuated to the point of invisibility. Yet strengthening it would ineluctably bring people face-to-face with the problems of governance, including those of sustainability. Citizens brought into confrontation with the stark problems of governing their communities through hands-on participation … would be educated in the sources of community troubles, in the origins of their way of life, and in the trade-offs that must be accepted in any collective choice. With regard to sustainability issues in particular, self-governing citizens would more likely learn the ecological costs of their community's lifestyle and socioeconomic character.\footnote{Thomas Prugh, Robert Costanza, and Herman Daly, \textit{The Local Politics of Global Sustainability}, Washington D.C., Island Press, 2000, p.99.}
\end{quote}

Pruh, Costanza and Daly argued that ‘strong’ democracy, with active involvement by the population in politics, is required to augment responsible citizenship. Following Benjamin Barber, they saw this being achieved through an augmentation of the representative democracy of nation-states with more direct, participatory forms of local democracy.
I have argued elsewhere, drawing upon the work of Quentin Skinner, J.G.A. Pockock and others, that to sustain democracy and the commitment to the common good in opposition to consumerism, will require a revival of republicanism. Republicanism is the commitment to liberty and the civic virtues required to defend it. From the perspective of republicanism, liberty is defined in opposition to slavery, the condition where people can be harmed by those on whom they are dependent. People cannot assert themselves without fear of retribution. Participation in public life, and all that is required to make such participation possible, including the defence of institutions that protect individuals’ autonomy (most importantly, legal institutions) and develop their potential (such as educational institutions), is a duty required of all citizens to prevent enslavement. Consumerism is a corruption of such civic virtues, and with the disregard by populations of these duties, institutions are being corrupted and people as individuals and nations are being enslaved to the corporatocracy, the managers of business corporations and their collaborators in politics.

However, what has been offered so far is exploratory, designed to show that achieving such strong democracy is a plausible goal, and to show why it is very unlikely that environmental problems will be addressed without such strong democracy. And it does seem unlikely that the struggle against the fragmentation which has led to the corrosion of ethics will be successful unless it is simultaneously part of the struggle for democracy.

Again process metaphysics is of major importance. Democracy implies power in the hands of the people capable of collective will formation. It assumes that people are free agents, or are at least capable of becoming free agents, able to deliberate to reach a consensus on how to act collectively, and then to commit themselves to such collective action. All this is unintelligible from the perspective of scientific materialism. While there are other philosophies that uphold the notion of free human agency, most of these are associated with some form of idealism broadly understood. Only process metaphysics (again broadly understood) has defended free agency by questioning scientific materialism at its foundations and defending an alternative form of science compatible with the humanities, conceiving humans as free agents. Beyond this, process metaphysics provides the reference point for considering and choosing what to aim at and how to act. It upholds a notion of rationality (in opposition to that of logical positivism and related intellectual movements) that can encompass both the

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development of scientific ideas and the development of ethical and political ideas, thereby undermining the claims of those who would dismiss ethics and politics as irrational because they do not conform to ‘scientific’ reasoning. And it upholds a view of life, both human and non-human, that values it and reveals how life and the conditions for it can be augmented. Finally, and this a dimension that has been little explored, by upholding on naturalistic foundations the status of narratives as the core of actions, individual and collective, process metaphysics provides a way of forming a collective will while conceiving humans as part of nature and without reducing people to instruments.

Scientific materialism, by denying the validity of narratives, has served to uphold hidden, monologic narratives that reduce people to instruments of power elites, while process metaphysics cultivates self-reflective subjects able to form themselves through explicitly formulated, dialogic narratives. Such narratives give a place to competing perspectives, competing versions of themselves, and a place for their continual questioning and reformulation by those who are living them out. The practice of democracy involves making these narratives and their different versions explicit, socializing people to understand, choose between and commit themselves to these narratives, and then providing them with the knowledge and means to participate in questioning and revising them.

‘FEELING FOR THE WHOLE’ AS THE ULTIMATE VIRTUE

The problem still remains, however, that such strong democracy is not yet seen as attractive enough to the general population for it to really challenge the consumerism of neo-liberal capitalism. Furthermore, the conditions of sustaining democracy have not been fully considered. Traditionally, democracy has been criticized, and what democracies there have been have decayed, because people generally are not sufficiently committed to the common good. Democratic societies have had a tendency to tear themselves apart through internal dissension or simply decay through excessive egoism. What seems to be lacking is a compelling ethics to make democracy both possible and sustainable. This is clearly a major problem at present. Born’s point, that the lack of ethics associated with the fragmentation of people’s work, still needs to be addressed in order to develop the forms of thinking and motivation required if people are going to struggle for and then sustain democracy. How can this be done?

Guidance in this regard is provided by the theorist of architecture and town planning, Christopher Alexander. Alexander has been concerned to diagnose the failure of modernist and postmodernist architecture to produce beautiful buildings, beautiful built-up environments and vibrant communities. He came to the conclusion
that the problem lies in the conception of the world or world-picture assumed by architects, a world-picture ‘that essentially makes it impossible to make buildings well.’ As he put it:

I believe that we have a residue of a world-picture which is essentially mechanical in nature – what we might call the mechanistic-rationalist world-picture. … Like an infection it has entered us, it affects our actions, it affects our morals, it affects our sense of beauty. It controls the way we think when we try to make buildings and – in my view – it has made the making of beautiful buildings all but impossible.\(^{16}\)

To diagnose the failures and overcome the influence of this world-picture, Alexander argued for an alternative view of the world, one centering on the concept of order. This view allows that there are different degrees of life in various wholes such that ‘statements about relative degree of harmony, or life, or wholeness – basic aspects of order – are understood as potentially true or false.’\(^{17}\) More importantly where developing an ecological ethics is concerned, Alexander has argued that ‘feeling’ is central to the process of building environments which are alive and beautiful and in appreciating beauty and life (which for Alexander are close to being equivalent: what we see as more beautiful is what we see as more alive and as conducive to life).

This is a view which accords with and is supported by the process metaphysics of C.S. Peirce and A.N. Whitehead. Each of these accorded a central place to feeling, with Peirce arguing that while logic is a branch of ethics, ethics is a branch of aesthetics. Whitehead argued in *Process and Reality* that Kant had produced an inadequate transcendental aesthetic, that is, an inadequate analysis of the most basic forms of experience. Whitehead presented his own work as an attempt to overcome this failure and thereby to provide more adequate solutions to every aspect of philosophy with which Kant had been concerned. Whitehead criticized Kant for failing to consider adequately the most primitive dimension of experience, feeling, which Whitehead took to be central to the concrescence of the primacy existents, actual occasions. Effectively, Whitehead was claiming that an adequate appreciation and analysis of feeling would provide the basis for characterizing physical existence, life and beauty and provide a foundation for ethics. As he grandly proclaimed:

The philosophy of organism aspires to construct a critique of pure feeling, in the philosophical position in which Kant put his *Critique of Pure Reason*. This should also supersede the remaining *Critiques* required in the Kantian philosophy. Thus


in the organic philosophy Kant’s ‘Transcendental Aesthetic’ becomes a distorted fragment of what should have been his main topic.\textsuperscript{18}

Whitehead characterized beauty only briefly in a concluding chapter of Adventures of Ideas. Alexander’s work can be taken as a vindication and advance of Whitehead’s claims that feeling is central to understanding physical existence, life and art and is central to ethics, and that beauty and the quest to augment it are centrally important to all this. And since for Alexander, building is a process within nature with the same ontological status as any other pattern, he can also be regarded as having contributed to understanding the role of feeling in physical existence conceived primarily as process. In developing his insights into feeling, wholeness, centres, life and beauty in building, in the built environment and in life more generally, Alexander’s work can be taken as a major contribution to the revival of process metaphysics.\textsuperscript{19}

OVERCOMING MANAGERIALISM

According to Alexander, one of the most pernicious ways in which the mechanistic world-picture has influenced architecture has been the way architects, financiers, builders, tradesmen and those who will live in the buildings relate to each other. Building has been infected by Taylorism. Taylorism is associated in most people’s minds with the Fordist production line. It was a doctrine of the early twentieth century, supported not only by Ford, but also by Lenin, and it led to great advances in productivity in some areas, at the expense of dehumanizing work. It is usually thought to be obsolete as production lines are facilitating the replacement of people by computerized robots, while people are now deployed in more creative, less soul destroying work. But Alexander pointed out that Frederick Taylor, the founder of Taylorism, was arguing for something more basic, and in this regard his ideas are far from dead; they are alive and growing in influence. As he noted:

> What we know as modern bureaucracy – American, British, Russian, Swedish, or Chinese – with its system of rules, questions and answers, which make little provision for human actuality or human difference, came from the application of Frederick Taylor’s ideas to large human institutions. What we know as modern construction, is the application of Taylorism to the assembly of physical components. What we know as modern agriculture, lies in the application of Taylor’s ideas to farms, animals, crops, water resources, fertilizers, and machines.


Taylorism involves as much as possible placing knowledge and decision-making in the hands of managers. Workers are to be reduced to mere instruments, to cogs in the machine. ‘Work’ is reduced to mere ‘labour’, as Hannah Arendt characterized these in *The Human Condition*. Taylorist managerialism involves undermining not only craftsmanship, but also professionalism in work and all that is involved in this. Taylorism is in fact the apogee of the fragmentation of work which Born diagnosed as the root cause of the decay of ethics.

In architecture the effects of this fragmentation are clear. Instead of workers thinking about how their work will contribute to the building and to the lives of those who will live or use the building, they follow the instructions of the builder who in turn is implementing the design of the architect. The design is produced to impress those who provide finance, with the main concern being how pictures will look in magazines. The ultimate concern is the profitability to the investor. All decisions about the final product are made before the building begins. As a consequence, builders no longer produce beautiful buildings and beautiful built-up environments which are conducive to life and vibrant communities. We now have ugly buildings that are inimical to life and destroy community. By contrasting old and new architecture, Alexander has been able to work out what is missing and has called for a return to the old ways of building.

What would this involve? Building is the generation of form, that is, morphogenesis. Alexander argued that the kind of morphogenesis that produces living structures takes place through a process of structure preserving transformations in which centres are generated in such a way that they augment each other. First and foremost, a return to the old ways would involve developing a feel for the whole and of how its centres relate to each other. That the development of such feeling is essential to good building is a central conclusion of Alexander’s work. As he put it: ‘I assert, simply, that all living process hinges on the production of deep feeling. And I assert that this one idea encapsulates all the other ideas, and covers all aspects of the living process.’ Wholeness and deep structure are enormously difficult to see, Alexander noted, particularly in real world situations, and our current modes of perception are not attuned to seeing the wholeness around us. Yet, to find agreement, it is imperative that we have a workable and practical method of seeing wholeness and assessing the degree to which a proposed ‘next step’ does increase the life and wholeness of an evolving

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structure. While this seems to be incredibly difficult, people in traditional societies did manage these tasks. How were they able to do this? Alexander described what is involved:

Each observer is able to judge the whole, to see and experience the whole, by paying attention to the question: Is the emerging building increasing my own wholeness? Is it increasing the feeling I experience when I am in touch with that thing? … [T]he extent to which a building is coming to life can be steered by the extent to which it has deep feeling in it, deep feeling that we experience. This can be done for any emerging entity. … The living process can therefore be steered, kept on course towards the authentic whole, when the builder consistently uses the emerging feeling of the whole as the origin of his insight, as the guiding light at the end of the tunnel by which he steers.  

It is important to clarify what Alexander means by ‘feeling’ here. Because people are dominated by the mechanistic view of the world, language has been contaminated so that feelings tend to be thought of as subjective emotional states, making it difficult to appreciate what this feeling for the whole is. But, Alexander argued, ‘feeling’ should not be regarded as merely subjective or equated with emotion. ‘It is a feeling in the singular, which comes from the whole’ he explained. ‘It arises in us, but it originates in the wholeness which is actually there. The process of respecting and extending and creating the whole, and the process of using feeling, are one and the same. Real feeling, true feeling, is the experience of the whole.’ Alexander argues that it was because traditional builders worked on the basis of this sense of the whole that they produced beautiful buildings: ‘They paid attention to the feeling of the emerging structure … Guided by feeling, they were able to make each small step count in the emergence of a new unfolding whole.’

What I am suggesting here is that this point illuminates the connection between work and ethics alluded to by Born, while at the same time vindicating Whitehead’s claims concerning the importance of feeling to ethics and aesthetics and beauty to civilization. Alexander has shown that something was understood in the past that has now been lost, and he has shown what needs to be recovered. Recovering this will involve cultivating a feeling for the whole and using to this not only to guide building, but to appreciate what an abomination work is when people are reduced to mere instruments of others.

Alexander was not content to merely resurrect architecture and town planning; he

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believed that work to create beautiful built environments could revive and reinvigorate communities, transform society and promote an ecological ethics. He suggested that this model for acting and building could be taken up throughout society and could then displace Taylorism. This would involve a revival of craftsmanship and professionalism where people were no longer reduced to instruments but would see themselves as participating in the broader processes of form generation or 'morphogenesis'. This can be extended to all occupations. The same feeling for the whole is required of teachers, for instance, so that in their work they also should cultivate a sense of wholeness in their self-formation through providing the conditions for and augment the self-formation of their students as individuals and as members of communities, local, national and international. This cultivation of the ability to feel the whole and to act accordingly, Alexander argues, is crucially important for changing our relationship to the land. As he put it:

… we shall all gradually come to feel a concrete and realistic obligation to make sure that every action taken, by anyone, in any place, always, heals the land. A widespread ethical change begins to appear. Healing the land is understood by more and more people: Throughout society, slowly each person comes to recognize his or her fundamental obligation to make sure that in every act of every kind, each person does what he or she can do to heal the land and to regenerate, shape, form, decorate, and improve the living Earth of which it is part.26

WORK, DEMOCRACY AND THE ENVIRONMENT

The feel for the whole required by and engendered by work as Alexander described it is, I am suggesting, the core of the ethics associated with work that Born was lamenting has been eroded and largely lost. Alexander is charting a course to reverse this erosion. In this, Alexander’s ideas concur with and provide support efforts to revive virtue ethics, for instance, as in Robert Solomon’s defence of holism in business ethics. ‘The ultimate aim of the Aristotelian approach to business’ Solomon argued ‘is to cultivate whole human beings.’ ‘This search for wholeness in the individual employee or manager extends to the corporation itself’ he continued. ‘Holism … is concern for the whole rather than some of its parts, and emphasis on the big picture rather than the analysis of narrowly circumscribed details such as profits.’ This leads to a different understanding of ethics. ‘We have to reject all those false dichotomies and antagonisms between business and ethics, between profit and doing good, between personal and

corporate values and virtues.  

Such holism could provide the conditions for the struggle for freedom and democracy. As Alexander argued, morphogenesis in society which augments life and the community both requires people who are free to participate in this morphogenesis and provides the conditions for this freedom. Freedom, it could be argued, is the condition for people being able to live and act in accordance with what they feel to be right. It is the condition for them to be able to live a fully human life, a life in which they can gain a sense of themselves through their participation in creating and augmenting the life of their communities and societies, and participating in the formation of and augmenting the life of humanity and the rest of nature. Only with such freedom or liberty, Alexander pointed out, can we have an unfolding of the creative process of generating form guided by feeling for the whole:

Why is freedom associated with the morphogenetic character of social processes? Because it is the shape-creating, organization-generating, aspect of process which ultimately allows people to do what they want, what they desire, what they need, and what is deeply adapted to life as it is lived and to experience as it is felt. The humanity of the environment comes about only when the processes are morphogenetic, are whole seeking, are placed in a context that gradually allows people to work towards a living whole in which each person plays a part.

Participation in morphogenesis and freedom presuppose and augment each other. A feeling for particular wholes tends to generate feeling for ever broader wholes, from local communities to society, to humanity and to the rest of nature. The feeling for these wholes in turn would engender an appreciation of the value of liberty to participate in creating and participating in these living wholes. This is a freedom oriented towards the common good. It is this feeling for and commitment to the common good which is required for people to be able to understand each other’s points of view and reach a consensus on what goals to aim at that are worth striving for.

An ethics grounded in unfragmented, creative forms of work would then augment other virtues required for upholding and sustaining democracy. Earlier I suggested that democracy requires explicitly formulated, dialogic narratives to orient people for action and provide a reference point for questioning and interrogating institutions and social goals. In recent years, associated with the postmodern condition, people’s capacity to

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entertain, let alone produce, complex narratives has decayed. Consequently, people are less and less able to orient themselves through narratives, to relate their own lives to the lives of others, to traditions and to the goals of institutions and broader communities of which they are part. They are also less able to see their own narratives from the perspective of others and less able to bring the narratives they are living out into question. The decay of narrative, particularly historical narrative, appears to be connected to the disempowerment of people; but the influence is mutual since the inability of people to formulate narratives to define their place in history also severely limits their capacity to unite and mobilize to achieve common goals, thus weakening democracy. What I am suggesting is that the decay in the capacity to produce narratives is at least partly a consequence of the fragmentation of work and the associated loss of the ability to achieve a feeling for the whole. The development of this feeling would at the same time facilitate people's capacity to understand and participate in the production of narratives.

In particular, feeling for diverse wholes should make it easier for people to formulate narratives which allow for a multiplicity of centres of action, thereby making it easier for people to comprehend and engage with multi-leveled democracy. Pruh, Costanza and Daly in promoting strong democracy were supporting democracy at more than one level. In this work, however, they focused mostly on USA and its problems, and did not consider the relationship between local democracy and the global system. As I noted in the introduction, the present global system is dominated by an immanent logic which threatens environmental destruction on a massive scale. This is a problem that has to be addressed if we are to create a sustainable world-order. Daly, along with John Cobb, has addressed this problem more adequately elsewhere, arguing for a new world-order organized into ‘communities of communities’. Alexander argued that life is characterized by the development of mutually enhancing centres at multiple scales. Although he was primarily concerned with buildings, Alexander believed this analysis could be generalized. It can be generalized to human communities and ecosystems. It would follow that a vibrant human community or a vibrant ecosystem would also consist of multiple reinforcing centres and multiple levels. The cultivation of a feeling for wholes in work involves a feeling not only for the whole but also for centres and how they augment each other. Developing this would greatly facilitate the ability to recognize and appreciate multiple mutually augmenting centres.

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in society and in the world, and the need to support such centres. This would facilitate the kind of thinking required to comprehend and support such a global order.

As the ethical corrosion brought about by the fragmentation of work has been associated with and furthered the decay of democracy, overcoming this fragmentation by cultivating a feeling for the whole as the basis for living should facilitate the revival of democracy. This is required to relate people's individual lives, politics and environmental issues at every level, from the local to the global, to enable people to organize and function within democracies while supporting and augmenting each other's liberty to contribute to rather than undermining the global ecosystem. It is what is required to think globally while acting locally in such a way that acting locally does really incorporate global thinking.

TOWARDS AN ECOLOGICAL CIVILIZATION

In the introduction to this paper I described briefly the dynamics of the global system which is driving people towards the destruction of their global environment. An ecological ethics needs to consider not only what we should do if the social order in which we are living makes it extremely difficult for us to live in a way that contributes to rather than undermines the ecological processes conducive to human life, but how to change this social order. I have attempted to show through this paper that process metaphysics could provide the form of ecological ethics required to effect this transformation. Can this proposal be taken seriously? Beck's skepticism about ethics is justified if morality is conceived of in its present form as constraint on the self-interest of individuals, examined and sometimes defended by moral philosophy, a subdiscipline of philosophy, which is just one discipline among others. But this is part of the fragmentation of culture, life and work which has undermined ethics. If process metaphysics can provide the foundations for ecological ethics, it is because it is first and foremost a rebellion against this fragmentation. To carry through this rebellion, it must do more than provide a unifying discourse which contextualizes ethics. It has to inspire people to act. I have suggested that the vision that needs to be upheld is of democracy; genuine democracy, against domination of the world by the forces of the market and those who have wealth. The struggle against environmental destruction should be seen as a struggle for liberty and democracy by communities ranging from the local to the global. This will involve the re-figuration of the narratives people, as individuals and communities, are living out on the basis of a new vision of the future, one in which people will no longer be enslaved by market forces and will be able to create ecologically sustainable societies. This by itself is unlikely to be a challenge to the consumerism which now dominates people throughout most of the world. Max Born was right. People's ethics in the past was grounded in work, and the fragmentation of
work has corroded any effective ethics. Alexander’s proposals have provided a concrete
goal for people to aim at, to change the nature of the work so that people are no longer
reduced to instruments of Taylorist management structures, but can appreciate the
products of their work as participation in the formation of life.

Could this provide the basis for an ecological ethics that would be effective?
Alexander suggested that patterns equivalent to small, snippable genes, could spread
through society and transform it. If the spreading of new patterns at local levels could
bring about greater capacity for people to achieve solidarity in developing such
patterns, this could bring about global changes, producing social environments
conducive to the further development of such patterns. This should foster the
development of people with a feel for the whole who, for this reason, could organize
democratically and maintain democratic structures. What is important here is that
ecological ethics not be seen merely in relation to individuals, but in relation to
institutions, organizations and communities; that is, in relation to political philosophy.
Ethics should be seen in relation to the virtues required to sustain ecologically
sustainable social forms as the condition for the flourishing of life. Conversely, politics
should not be conceived purely in terms of power and organizing to achieve specific
goals, but should be concerned centrally with cultivating the people committed to
fostering life. It is in this way that process metaphysics, which can integrate all these
aspects, could provide ethics that could mobilize people to effective action to avoid an
ecological catastrophe and create an ecological civilization.

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