

Article

Automobility: Global Warming as Symptomatology

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Received: 2 February 2009 / Accepted: 8 April 2009 / Published: 20 April 2009

Abstract: The argument of this paper is that sustainability requires a new worldview-paradigm. It critically evaluates Gore’s liberal-based environmentalism in order to show how “shallow ecologies” are called into question by deeper ecologies. This analysis leads to the notion that global warming is better understood as a symptom indicative of the worldview that is the source for environmental crises. Heidegger’s ontological hermeneutics and its critique of modern technology show that the modern worldview involves an enframing (a totalizing technological ordering) of the natural. Enframing reveals entities as standing reserve (on demand energy suppliers). My thesis maintains that enframing is geographically expressed as automobility. Because of the energy needs used to maintain automobility, reaching the goal of sustainability requires rethinking the spatial organization of life as a function of stored energy technologies.

Keywords: Global warming; symptomatology; automobility; sustainability; enframing; standing reserve; unearthed; unrootedness; leveled; de-geographication; respectful humility; uprootedness.

1. Introduction: Toward the Requirements for a Sustainable World

The purpose of this paper is to clear a way for an investigation of the spatial parameters of forms of life that need to be developed in order to reach the goal of sustainability. Sustainability involves the healthy functioning of the more-than-human world in a way that sustains the continuance of life and promotes its well-being. Part One is based on the distinction in environmental philosophy between shallow ecology and deep ecology; it does not envision these rubrics in a dichotomous fashion, but rather as poles of a continuum. Al Gore’s popular and widely-accepted liberal-based position is critically challenged as too shallow for the goals of sustainability and various points are raised by

which deeper ecological paths and solutions need to be forged. Part Two develops the concept of automobility and employs Heidegger's hermeneutic ontology as strategy for understanding the essence of automobility as the spatial aspect of modern technology. This reflection provides a deeper understanding of the worldview that has led us to ecological disaster and thus provides us with the key factor to open ourselves toward a new worldview of sustainability.

To avoid misunderstanding at the outset, the term 'automobility' is employed not to refer to automobiles, even though they are perhaps the paradigmatic exemplar of automobility, for we have built our landscapes in their image, but rather to emphasize the spatial production of modern technology. 'Modern technology' is to be taken in the Heideggerian sense of the term: as that which sets upon nature in order to extract and store energy. Traditional technologies do not unlock energy in a way that it can be stored. Heidegger distinguishes modern from traditional technology in that the modern transforms the experienced life-world and its experienced ecological patternings into a function of energy production. An example is a regional landscape transformed into a coal mining district, e.g., the Ruhr Valley, which had existed for centuries in the support of small farms and human-scaled towns being transformed over decades into a site for coal extraction. Another example is the transformation of a river into a "power station". Automobility is a correlative concept that captures the production of space as a function of these transformations made possible by modern technologies. These spatial productions in themselves are unsustainable.

2. Part One: Al Gore and the Reactive Measures of Shallow Ecology versus the Proactive Doctrine of Sustainability

2.1. Positional Points for Deeper Ecological Consideration

The book, *An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It*, by Nobel Prize winner and former Vice President of the United States, Al Gore, offers "a convenient way" to introduce my problematic [1]. Gore organizes his treatise on the basis of three grave concerns—phenomena that are altering our relation to the earth in destructive ways: overpopulation (of humans), scientific and technological misuses and "side-effects", and the misconceptions and outdated ways by which we think about the climate/environmental crises. Throughout his exposition Gore delineates moral, political, economic, and technological issues that must be addressed if humankind is to divert transformations that threaten the current life-systems on the planet. Gore's profound sensitivity toward environmental problems is admirable. Nevertheless, I do have strongly critical remarks about his exposition that provide a way into my discussion concerning the development of a basis for sustainability. These criticisms lead us away from a shallow ecological orientation, which does not call into question the *Weltanschauung* at the basis of our praxes and attitudes, to a hermeneutic ontology that founds a deep ecology that engages a fundamental questioning of historico-cultural paradigms, which in this paper is argued to be a necessary moment in the adoption and implementation of a program of sustainability that can be successful.

Gore unwittingly bases his exposition on unwarranted epistemological assumptions that comprise an ordering function in the received modern liberal worldview, which has enjoyed hegemony since the

eighteenth-century bourgeois revolutions. His delineation of the modalities of morality, sociality, politics, economics, and technology implies that they are separate domains that are then linked through thought and forged together by cultural relations, which is an ideology based in the doctrine of atomistic association. Gore does not recognize a holistic interrelation whereby each of these modalities is already pregnant with the others, e.g., that some technology or other already implicates political, economic, social, and moral processes and structures in its very essence/Being. Gore's assumed doctrine of functional neutrality, i.e., "it depends on how you use it", carries some sense of correctness in that forms of implementation do matter within the overall cultural context, but the doctrine of technological neutrality remains dangerously naïve. For example, with his concern for the lack of community, Gore seems not to recognize that certain forms of technology may indeed undermine the very possibility of community, and moreover by exacerbating this undermining in a free market system where people can basically buy and sell what they want, the proliferation of such community-disintegrative technology may destroy the possibility for the political will that he so cherishes. No such radical and critical reflection enters his discussions. The major consequence of his assumed modern epistemological atomism (in this case partitioned forms constitutive of a culture) is that Gore's evaluation of a need for cultural change and his proposed solutions to the environmental crisis do not go deep and far enough, if indeed we are to hold ourselves to the goal of sustainability. The concept-formation of sustainability is not compatible with an atomistic epistemology through which problem-solving directives issue forth only as the shallow implementations of instrumental rationality. My treatment of automobility as the fundamental obstacle in the way of developing sustainable forms of life involves a holistic ontological approach that uncovers the way of Being from which the automobile organization of life is its spatial concretization. Martin Heidegger's radical ontological hermeneutics can provide a clearing that supports the concept formation of sustainability by starting with a critical investigation into the restructuring matrix of automobility, the spatial moment of a modern technological way of life that is the anthropogenic source for global warming, or what we now call climate change.

In his discussion of technology and science, Gore writes of advances or progress and their unintended side-effects [1]. This way of speaking already fosters human-centered chauvinism in the sense that human intentions are taken as the hegemonic constitutive measure, while the unintended phenomena accompanying or associated with human activities are glitches in a humanly designed world, as if the earth/world does not have constitutive efficacy and as if human expressivities are not simply one set of agencies in a complex context of many agencies [2]. In addition, the doctrine of side-effects does not take into account that all cultural objectivations of human expressivities exhibit their own Being, incommensurate, to some degree or another, with our intentions [3]. Moreover, this received hubris of modern scientific ideology, "the control and elimination of side-effects", leads Gore to a sanguine position concerning the solving of the climate crisis—that we can tackle the crisis technologically through a new political will and with the recognition that we need not choose between environmental and economic health. His related enthusiastic adoption of the information age and computer technology is indicative of this fundamental belief in so-called technological progress [4].

On the issue of economics, many environmentalists that develop a doctrine of sustainability do not agree with him [5]. We will indeed have to continue to choose between environmental and economic

health as long as we support an economic system that requires growth (e.g., surplus value and a continued consumerism) and we choose growth-oriented solutions (e.g., green products with green economic incentives as the way to eliminate unwanted side-effects are to be counted as a shallow approach). Green technologies contextualized in an economic system of growth remain impotent when considering the strident goal of developing viable policies of sustainability. Sustainability requires a new contextualization of human intentions whereby unintended results from continued growth are not a cue for a greater manipulation of the natural world, but less. In the cases just cited we see that intentions involving technological mastery and environmentalism as a function of economics must be called into question. Thus, automobility, as the major factor of global warming and other environmental problems, is treated in a way that calls for the continual hegemony of economic concerns, as green machines and vehicles are suppose to save us from our environmental degradation while economic expansion continues on its same course.

Many environmental thinkers have questioned the presupposed tenets, e.g., the doctrine of linear progress, on which Gore bases his belief in the success of a scientific/technological solution to global warming and environmental problems in general. “Professional ecologists such as Frank Egler have countered that ‘Nature is not only more complex than we think, it is more complex than we *can* think [6]’”. I believe that a commitment to sustainability must recognize limits to human cognition and thus must take a radically different approach. This does not mean that science and technology have reduced roles, but that their roles must be based on a new attitude of *respectful humility* [7]. The manipulation and appropriation of nature must no longer be our technological goals. Rather, we should be modifying our own societal/cultural forms, which include science and technology, to live in greater harmony within the context of natural conditions and agencies. Sciences and technologies that apprehend those conditions can serve to help us become much more respectful of natural conditions. Neither science nor technology needs to challenge natural processes; it rather needs to challenge us to live more responsibly. The chauvinist worldview with its *doctrine of reactive reparation* when it comes to environmental degradation, no longer can be promoted as a viable behavioral process. We can no longer appropriate nature and then deal with the so called “unintended side-effects”—a dealing that amounts to a continual re-engineering of nature, which leads to consequences that dangerously exceed our powers of forecasting. But a new pro-activity conducive to sustainability should be more focused on changing our relation to nature, not so much on changing nature. Gore’s critical analysis merely focuses on wiser uses of technology; he does not call into question radically enough the doctrine of forcing nature to serve us and does not clearly advocate a science and technology that serves nature as first priority. This can be accomplished only by fundamental transformations in human interpretative praxes. In practical language the transformation advocated here means that we dramatically minimize our ecological footprints, which entails new geo- economic/political/social spatial productions, concerning which science and technology play a vital role. Cultural transformation for sustainability requires a new epistemological basis that recognizes the ontological structure of sustainable ecology as having priority over human intentions such that we eliminate certain of our expressivities and objectivations, rather than continuing with the manipulation of nature to accommodate our intentions—a move away from anthropocentric hegemony to a model of human contextualization that leads away from a worldview that presupposes the culture/nature dualism.

Bio-regionalists have called for new and radical political changes such as the re-construction of political boundaries to be correlative with biospheric boundaries so that the political domain becomes interfused with the natural domain in an organic development pattern [8]. Forms of human life then are organized in context with natural ecologies—an interrelation for mutual benefit. This ecological rootedness to a place, to its place-character or *genius loci* as the key to ecological bounded praxes, must be accomplished without the fascist tendencies of race/nation imperialisms of the past, which are avoidable through the political tactics of decentralization and networking and the value of diversity within local-bounds. Gore champions the democratic process but really offers no proposals that would restructure political bodies in a way that would support the implementation of sustainability. A society that culturally and politically does not attune its practices to place-bound ecologies and their interrelations does not merit the accolade of supporting sustainability. As I will show, to call into question the geography of automobility requires thinking about how the task to de-structure automobility might show us how to re-structure life toward the goal of sustainability.

There is still another point germane to the issue of automobility which shows the non-viability of Gore's shallow ecology. Peak oil theorists are issuing very serious warnings concerning non-renewable energy consumption [9]. Hypothetically, if we could immediately solve the global warming (climate change) problem in Gore's shallow, technological sense, then we would nevertheless still be in the most utterly grave circumstances concerning energy. Even if it were possible to solve the problem of global warming with the use of alternative energy sources, there still would remain an energy crisis both in terms of shortages and implementations that carry many unwanted so-called side-effects. A policy of sustainability would entail tackling the energy crisis directly, not because of its link to the global warming problem; sustainability entails more dramatic measures, necessary curbs on modern excesses promoted by neo-liberal economic globalization and the social structures that it constructs, concerning which Gore's sanguine liberal-based ideology is not prepared to face.

2.2. Global Warming: From Problem to Symptom

My fundamental criticism, however, is that Gore sees global warming as *the problem* rather than as *a symptom* of a much deeper flaw/problematic in culture, and this delimits his thinking to remain within a shallow ecological viewpoint, foiling an analysis that would develop toward a viable sustainability. His focus on global warming limits his solution to the environmental crisis to a shallow technological fix. Sure he advocates a change in forms of life, but these are merely a function of, or the requirement for, the implementation of technologies that will save us and the planet. In this way his thinking remains within the modern scientific attitude that in a deep or foundational sense has led to the predicament in which we find ourselves [10]. The efforts to dominate nature, dominations implemented through modern technological praxes, have led to drastic changes to the planet as a whole in an extremely short time. We now see that those changes, based on considering our needs only (the mentality of natural resources to be ordered about on our terms), are destroying the life of, and on, the planet.

In this paper I will treat global warming as a symptom and address that which I have been calling 'automobility' as the true source of the problem of global warming. Global warming is the most

apparent symptom of automobility, but at the same time global warming dangerously averts our attention away from discovering the real cure for our “dis-ease”, and from a *complex* of interrelated dangerous and egregious problems, which are to be confronted through an archaeological hermeneutics that traces back to the interpretive ground from which the complex manifests. Specifically, if we want to address environmental problems for the purpose of developing a policy of sustainability, we will need to critically reflect on automobility as the fundamental principle of modern material culture from which our environmental problems have ensued. Thus global warming is a jumping off point, a kind of leading clue to engage in a deeper way of thinking, which is required for the development of the concept of sustainability, from which we then are to be drawn to develop a new and viable worldview from the seed concept of sustainability. There can be no viable policies of sustainability without dealing with the egregious obstacle of an auto-mobile material culture.

Donald Scherer, in his “*The Ethics of Sustainable Resources*”, makes very useful distinctions concerning the sustainability of choice, lifestyle, and resources in the important task of defining and elaborating the concept of sustainability [11]. Just what is to be sustained and how it is to be sustained is fundamental to a program of implementation. But I maintain that Scherer’s undergirding principle, which is acceptable to many as viable, is flawed. He states, “In all these formulations sustainability implies that what we do will not constrain others like us from carrying on as we have.... The same choices, the same lifestyle, the same resources ought to be available to them as to us [11]”. There seems to be a contradiction contained here—that we change while not changing. Sustainability requires a major paradigm shift that does not leave us with the same possibilities of engagements (social relations, activities, events), entities (objects of material culture), and spatial organizations (at the basic level, the auto-scape). I will go on to show that the fundamental basis of the non-sustainable matrix is automobility. And, even in Al Gore’s shallow ecology there is the realization that we cannot carry on in the same way that we have been carrying on, although he shallowly tries to maintain our fundamental liberal/bourgeois paradigms. If we are going to provide for a future, we recognize that there will not be a future if the same things that we enjoy are still available to future generations. It is not merely that we change our ways so that future generations can enjoy the same choices, lifestyles, and resources, rather sustainability requires us to change our ways in order to save the planet so that future generations will be enabled to enjoy other forms, that is, sustainable, modes of life. In support, many environmentalists have called on us to minimize consumption, discourage attitudes of consumerism, replace materialistic goals, and direct our attention to find other—natural, social, and spiritual—enjoyments. I maintain that such moral principles of parsimony/exhortations for restraint are a necessary requirement for sustainability. Thus, future generations will not and can not consume the amount of goods as the average first world citizens do today. But consuming less still does not alter the huge expenditure of energy that it takes to fuel automobility.

Furthermore, I maintain that sustainability carries with it a therapeutic dimension in the demand for healing degraded environments and sickly life forms, as well as maintaining the good health of life on earth as well as the earthly ecosystems that sustain it, which include non-living constituents [12]. The therapeutic dimension requires a rejection of human chauvinism so that we think about the good of the earth, and not first and foremost how we can appropriate the earth and its non-human constituents as instrumentalities for selfish human wants. Implementation of therapeutics obviously delimits choices *a*

priori and requires goals of a healthy earth as prerequisite to human health. So, it seems to me clear that we are in the position of having to say to future earth dwellers: “don’t do that which has been done, or don’t do what we are still doing, but instead, do as required in order to make progress in developing sustainability”. And this means: “do not live as we have”. Thus in my concept-formation of sustainability, I see that it necessarily carries a non-consumer lifestyle model along with a therapeutic dimension that requires constraining humanity from enjoying the same as we have, for the good of the earth and thus all life forms, including human life.

The fundamental ineluctable principle is that sustainability requires developing a new paradigm for human civilization. This sounds dramatic and it is; one need only see what is happening at this time in the world to recognize that wholesale change must be advocated and implemented as soon as possible, that is, immediately. We either do this proactively or we will be forced to do so reactively with the additional problem of the most grave of geo-political and natural consequences. Sustainability is not a choice, given the immanent consequences.

As a concluding remark to this section, the focus on the problem of global warming leads us away from dealing with deep problems that are to be addressed if the goal is to be sustainability. And beginning with the consequences of modern industrialization of the nineteenth century, we have already surpassed the point in which we would have any choice other than sustainability. Global warming is a most recent and a most dangerous symptom, which should not have arose if we had had the foresight to deal with prior indicators of our destructive civilization. In contrast, pro-activity is a major function of the paradigm of sustainability. But unfortunately, we have lived by a worldview that is a non-viable distortion of reality—nature interpreted as something to be forced to give up *her* secrets, penetrated and manipulated on the basis of subjecting nature to our will—to use Francis Bacon’s unabashed language of rape [13].

3. Part Two: Automobility as the Fundamental Underlying Ecological Problem to Which Global Warming Is a Symptom

3.1. The Concept of Automobility

A cognate of the neologism ‘automobility,’ ‘automobile,’ obviously first comes to mind upon hearing the new word. And, importantly, along with automobiles and the other forms of auto-mobile vehicles, comes the necessity of constructing an auto-geography, the landscape that is radically altered by being fitted to a culture saturated with automobiles and road-using vehicles. Auto-mobile vehicles are only separable in abstraction from the auto-mobile geographical organization that concretely shapes life to take place on the basis of its spatial patternings. And, there must be a culture that enacts its life as an auto-mobile culture by which automobility informs thinking, attitudes, and behaviors, in short, a worldview, and as such is constitutive of the taken-for-granted character of the everyday world, including the near ubiquitous identity as auto-machine operator. The greater breadth of the term, automobility, beyond the automobile to include other auto-mobile means of auto-locomotion/transport perhaps will be easily accepted, except if the most literal interpretation is mandated. But in a broader definition that I intend, automobility concerns any form of machinery that generates some form of

locomotion *from stored energy*, even if internal to the machine. And, I intend the term automobility in yet a still more general way. ‘Mobility’ means both the capacities to move and/or to be moved. Important to my critical analysis of modern culture’s implementation of, and dependence on, the spatial patternings of automobility, is this capacity to be moved. If we say that the enemy is mobilizing, we certainly mean more than what has the capacity to move, we mean all that can be moved, otherwise we need not fear a stockpile of weapons, for they do not move from one place to another on their own. Yet, ‘auto’ means for something to move on its own. So, it would seem that automobility could only include those things that can move on their own, that is, by their own agency or what we can call self-generated movement. However, I intend to include any entity exhibiting the capacity to-be-moved-on-its-own, which I will mean in quite a specific sense. This principle, of the capacity for something “to-be-moved-on-its-own”, seems perplexing, perhaps to be taken as an oxymoron as it seems to entail active passivity. But those machines capable of generating locomotion from stored energy have the capacity to move a myriad of entities that do not have this capacity to move, but have the capacity to be moved, that is to be moved by something auto-mobile. Thus these too become auto-mobile by being carried as load. Even though auto-mobile dependent, these entities participate in the transporting capacity of automobility and thus become auto-mobile. A human being becomes auto-mobile as an automobilist, and so does his bag of groceries as well as his seat belts. And even the carriage of the car itself is moved, that is, becomes auto-mobile on the basis of the transformation of stored energy in an engine that turns the driveshaft. If I just said used the phrase, “the capacity to be moved”, I would not get this specific sense of being moved through automobility, that is, to-be-moved-on-its-own through the transformation of stored energy that happens in a machine other than itself. And thus even the assembly line or automated factory involves the principle of automobility, which includes something-to-be-moved-on-its-own through its capability of functioning as the load for an object that has the capacity to move things through stored energy, of being an auto-mobile medium, e.g., the energy source for conveyor belts, kitchen sink disposals (food wastes), automated paint sprayers (paint), etc. Also to be included is the capacity to “being-moved-in-place” through a relatively stationary device, e.g., the auto-mobile ingredients in a blender, the auto-mobile air currents of the air conditioned room. The load-carrying principle and the principle of induced movement through something stationary also are crucial to the formation of the concept of automobility that I am developing. Thus when I use the term, ‘the material culture of automobility,’ it is to be understood to mean more than just the means of transport, which however serves a paramount role in the material culture of automobility, it also entails any mechanical entities that are auto-mobile through transference of stored energy and the productions of spatiality formed in its image.

Moreover, to understand just how far auto-mobility informs culture, let me offer a dramatic illustration. Let us imagine a south sea island in which the only infiltration of the modern world is a generator that runs only refrigerators. The refrigerator itself need not be mobile, but the movements of its inner workings are auto-mobile through access to a stored energy source at a storage station site. This single item of auto-mobile material culture is the most lethal form of auto-mobility for destroying the cultural traditions and creating a culture founded on auto-mobility. How? No longer will there be a need for communal daily fishing. One need fish but once a week and store the catch in the refrigerator. Thus the communal cooperation of daily life is radically altered. Furthermore, now that food can be

horded (before, it would perish), there is no need to share food in a communal setting such that everyone in the community is fed daily. One needs only to fish on one's own, based on individual or immediate family needs. Thus, the fundamental social organization of work and the associated structure of communal events are radically altered. Space-time modifications are now founded on the auto-mobility of one item and as such alter society's spatial organization through becoming an auto-mobile culture, as its forms of life now have been conditioned by the spatial patternings of auto-mobility.

Before leaving this section, let us make it clear how automobility is materially connected to global warming—the burning of the fuels used in the material culture of the “Industrial Revolution” is precisely responsible for global warming (climate change). If we could eliminate the hegemony of auto-mobile spatial patternings we would greatly reduce the need for such fuels. Yet, it does not follow that if we did not have those fuels we would not be auto-mobile, for alternative sources of energy also allow for auto-mobility. Even though many environmentalists, including Gore see merit in alternative sources, and pragmatically I do too, nevertheless quite crucially there are still spatial productivities/patternings that are a function of automobility that are inherently problematic for the goal of sustainability and they need to be uncovered and discussed [14]. Yet, it is important to treat the problem socio-historically in order to call into question the worldview, which means to regard the link to fossil fuels and global warming.

3.2. Heidegger's Hermeneutic Ontology as an Insightful Clue

The twentieth-century philosopher Martin Heidegger provides an approach that allows us to transcend the ideological-bound techno-rationalization represented in Gore's analysis of the problem of global warming so that we engage a more fundamental analysis that uncovers deeper interpretive roots. A more reflective total approach (versus the instrumental rationality of problem-solving) is necessary to inform the development of sustainability, for we must uncover the presuppositions of the worldview that deliver us over to auto-mobility, which opens us to a new reflection on sustainability. In his magnum opus, *Being and Time*, Heidegger puts forth a thesis—that Being itself is not a being/entity—that strikes at the core of Western thinking [15]. For example, Aristotle privileged primary substance, the individual entity, as the fundamental being, linking all other manners of being to it, his ten categories. According to Heidegger, Western thinking has continued to misunderstand the question of Being as a question of beings. In doing so, correctness, or the relation between a statement and a state of affairs, has substituted for a deeper sense of truth. When we focus on beings, trying to properly define them, Being hides, for Being is other than the entities brought forth from its context. Being is the whole or horizontal context that allows for the appearing of beings in the first place. This sounds like mysticism to those who don't understand the metaphysical tradition of the West. But Heidegger's notion here is no less understandable the scientific principle of Gestalt psychology that the whole is different than the sum of the parts. So, if your way of knowing limits you to examining parts, you will not understand the meaning of the whole. A way of Being (a whole—a worldview) is what we are seeking to understand through this attempt to engage in a deeper analysis. Thus, Being must be pursued in a way that we arrive at the happening of truth, how a particular way of Being brings forth or

unconceals beings, which means that we must think beyond the whatness of beings in terms of the correctness of definitions. Truth involves unconcealment of the essence of something through a way, an interpretive form of Being. “Some things” concretely manifest through socio-historical worldviews that allow entities to be brought into the clearing, that is, to be recognized/understood *as something*, as a type of being/entity. Before correctness can be established, the being must first be allowed to appear as something and this unconcealment is the deeper domain of truth. So a *way of Being* is an ontological agency, an ontological interpretive filter that allows certain beings to appear as the something that they appear as, as a function of the interpretive context. It is this essence/Being of automobility indicated by its symptom, global warming, that we must seek to uncover.

Taking up Heidegger’s hermeneutic ontology in its reflection on Being allows us to envision global warming as a symptom, as an appearing, complex phenomenon through a particular way, the interpretive form of Being to which modern human life has been claimed. We are led to the essence of which global warming is an appearing symptom, which is other than its correct definition—one of the goals of Gore’s book is to responsibly inform the average non-scientifically educated person as to the whatness of global warming, a correct saying of the phenomenon. From a Heideggerian standpoint, Gore’s shallow analysis is blind to deeper truths that concern more than establishing correct statements describing the whatness of global warming.

In the analysis of a later treatise, “*The Question Concerning Technology*”, Heidegger maintains that the essence of technology is not something technological—its Being is not to be interpreted as itself a being (a technology). He provides what is regarded as the (standard/accepted) correct definition of technology as a human activity and as a means to an end. By contrast to the correct definition, Heidegger’s analysis shows that the truth in the revealing/unconcealment or the essence/Being of modern technology that allows for modern technological entities to show themselves as such is a “challenging, which puts to nature the unreasonable demand that it supply energy which can be extracted and stored as such. But does this not hold true for the old windmill as well? No. Its sails do indeed turn in the wind; they are left entirely to the wind’s blowing. But the windmill does not unlock energy from the air currents in order to store it [16]”. The challenging is a setting-in-order, a setting upon nature, such that “the earth now reveals itself as a coal mining district” and “what the river is now, a water-power supplier, derives from the essence of the power station [16]”. What is the character of this unconcealment? “Everywhere everything is ordered to stand by, to be immediately on hand, indeed to stand there just so that it may be on call for a further ordering. Whatever is ordered about in this way has its own standing. We call it standing reserve [16]”. And the challenging that claims man to challenge nature in this way Heidegger labels, enframing. “Enframing means the gathering together of that setting-upon that sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve. Enframing means that the way of revealing that holds sway in the essence of modern technology and that is itself nothing technological [16]”. Modern physics, which interprets nature as a system of calculable forces is the herald of enframing. The way of Being through which entities stand in the clearing, as technological instrumentalities, is enframing and the way of Being of those entities is that of standing reserve.

This very brief discussion of Heidegger is important for two reasons. First, because my conception of automobility emphasizes the spatial organization of standing reserve, which Heidegger does not

treat, and because automobility entails an empirical manifestation of man's ordering attitude and behavior in terms of spatial production, we recognize an already established ontological analysis from which automobility is to be interpreted. Secondly, we have an exemplar by which we can see what is to be done to uncover the Being that allows something to appear as that something, which is always other than the appearing beings. Heidegger's hermeneutics provides the possibility to claim that the solution to the technologically induced problem of global warming is not itself something technological, if indeed we are to open ourselves to other possible interpretational modes of Being such that other kinds of entities would then be unconcealed. We want to free ourselves up to sustainability as a way of Being by being open for a new way of interpretation, a new worldview, a new paradigm for living, *other than enframing*, by which new kinds of entities other than those of standing reserve will show themselves from its clearing.

3.3. Redirecting Reflection from Symptom to Source

Al Gore is correct in stating that global warming is caused by the increase of greenhouse gasses trapping infrared radiation, with CO₂ being the most prevalent. In the U.S., coal burning power plants and automobiles are the chief contributors. He also states correctly that methane and nitric oxide are also contributors to global warming, which reach dangerous levels through industrialized orderings of farm animals, etc. All of these involve environmental contamination, what Gore would call side-effects of technological, industrialized society. But if we reflect on the essence of fossil fuel energy, we will be led to the way of Being that brings the symptom of global warming to unconcealment. Global warming is a symptom of the spatial productions of automobility manifesting the enframing that challenges nature and transforms living-spaces of the earth into sites of energy orderings in a dialectical intensification: the more storage of energy, the more production of auto-mobile spatiality. We want to redirect attention in order to come to terms with the disease rather than its symptomatic manifestation.

Let us ask after the location of these energy sources responsible for global warming by focusing on petroleum as it is most associated with the shallow meaning of automobility (the automobile). I am aware of steam engines and the use of coal in the first phase of the Industrial Revolution. Petroleum is usually thought to be a herald of the second phase of the Industrial Revolution. I am also aware of the basic differences between surface mining and underground mining. Since the standard reading is one of "progress", I will concentrate more on this "second phase". Oil comes from deep under the earth's surface where life on the whole does not take place. Life takes place about the surface of the earth and humankind is contextualized in earthly surface dwelling; human place-Being is the horizontal dimension of the earth's surface. The ground for our existential foothold is about the earth's surface that supports our life without artificial devices, all other spatial sectors below and above the earth's surface transcend the concrete realm from which we derive embodied-existential meanings. And if we are not overly literal about surface, it is obvious that all earthly life consists of surface dwelling. The vertical dimension indicates directions that transcend earthly life systems and the reality of everyday human life. Imagination links to the transcending vertical dimension, symbolic worlds, and indicates actual spatial domains below the earth's surface and above the earth's atmosphere that humans explore in very limited ways. It is remarkable that these fossil energy sources, organic matter that lived long

ago, extracted from below the spatial realm of earthly life in a specific non-life supporting niche, which is then technologically implemented in the surface realm in which this material cannot be found, destroy the complementary vertical dimension of the above, the atmospheric level, through artificially-induced chemical changes entrapping energy from the sun in the atmospheric boundary where such gasses do not belong. In the form of global warming but also with other environmental hazards, down to mere spillage, life-generating and sustaining processes necessary to the earth's living surface dwellers are put at risk through the unearthing of this alien material.

3.4. The Spatial Generation of Meanings

We must begin by recognizing our fundamental embodied interrelationship with the EarthBody as the source of life and existential meaning [17]. The spatiality of human life involves modalities of “implacement”—the collusion of the lived-body and its milieu, which constitutes the dimensions and directions of existential spatiality—the fundamental structures of orientation and identification [18]. The existential structure of human life is geographically inscribed, rendered by such meanings as path, goal, arrival, sojourn, destination, etc. Architecture, urban planning, vernacular building, landscape design, engineering, all concretize existential spatiality in some way or another, therapeutically or detrimentally, by interpreting the lived-landscape. The making of things for our livelihood gathers a world. Poiesis, or bringing forth, is the fundamental existentiality of this thing-making, world-gathering process that is spatially enacted, geographically inscribed—the manifestation of earthly meanings, either natural or human bringing forth. All human meanings are generated from the fundamental spatiality of existence. The spatializing/spatialized processes of world gathering through thing-making involve the crystallization of a particular way of Being-on-the-Earth. If automobility is an Industrial Age form of spatial production that applies to or appropriates a great myriad of things, which indeed it does, then automobility manifests hegemony in terms of world gathering, as it indeed does. Automobility is constitutive of a spatially inscribed worldview—a historico-geographical way of interpreting Being, a way of Being-on-the-Earth. In turn, an alternative goal of achieving sustainability requires its development as a spatializing/spatialized way of Being-on-the-Earth. The hegemony of auto-mobile spatial production as a way of Being-on-the-Earth is incompatible with spatial productions based in sustainability as a way of Being-on-the-Earth.

In traditional cultures, the objectivated products of human expressivities, the things that have been made, take on the place-character of the environment in spatially contextualized forms of life exhibiting the character of place-oriented culture. The natural entities on which humankind depends in the production of its cultural identity have their natural places along the surface of the earth. Social geography teaches us the vital, localized connections between social and geographical organization. Natural entities come from somewhere and their origin is intrinsic to their manifestation and they are identified on the basis of their localized earthly context. The very structure of spatializing/spatialized existential meanings remain fast even through radical modifications in historical socio-cultural relations to place-based geographies, even destructive ones [19]. Fundamentally, meanings are generated through the structures and processes of spatial situatedness that always manifest as socio-historical forms of culture, as interpreted ways of Being-on-the-Earth [20].

Radical transformations in the socio-historical contents of these basic existential structures occur through automobility. Automobility entails fundamental spatiotemporal transformations—spatially expanded zones of operation on the basis of truncations of time. Landscapes are appropriated on the basis of the implementation requirements of operating machines with certain characteristics and spatial requirements, phenomena that are quite disruptive to natural ecological processes, which are forced to accept these changes, whether destructive or not. For example, much is naturally changed just by the surfacing for auto-mobile transport: ground water, water tables in general, ground surface temperatures, destruction of flora and fauna. But transportation geographies—roads, parking lots, etc., radically transform the spatial organization of human life. It does this in a fundamental, overall way, but it is the interpretation of Being, a worldview that has “paved the way” for these transmogrifications to which we place our concern. Again, our point is that a viable doctrine of sustainability requires a deeper analysis than just an exhibiting that these transmogrifications are non-sustainable, for solutions then remain in a paradigm or worldview that itself must be called into question.

4. Toward the Essence of Automobility

In order to arrive at the essence of automobility, we cannot merely question auto-mobile technics and entities. We must uncover spatializing/spatialized characteristics of its way of interpreting Being.

4.1. *The Unearthed*

Fossil fuel, *being below the experiential life-supportable surface of the earth*, transcends any concrete existentially lived-meaning of place, yet it is of a real spatial location containing earthly substance. There is the place of extraction on the life-supportable surface, where humans work to procure such materials, but the actual location of the fossil fuel below the earth is outside of the realm of the life-sustaining surface and lived experience. By being brought to the earth’s surface, fossil fuels then are located somewhere, a place in the lifeworld, yet only on the basis of having been *unearthed*. ‘Unearthed’ means here to have been removed from below the life-supporting ground surface of the earth. This unearthing is not an event that is completed upon its extraction. In whatever forms it takes on the earth’s surface and in the sky above, this material retains the character of “having-been-unearthed”. This retaining indicates that the prefix, ‘un,’ itself contains another meaning, i.e., as being excluded from the category it names, “earthed”, meaning then, “not earthed”. Fossilized materials from below the life-sustaining surface of the earth are excluded from the category, “being-earthed”. This holds even though in previous form, these substances once comprised the materiality of life. But the key here is that in the present form as transformed decompositions of life located far below the life-sustaining surface, they are not of the earthed (the life-supportable zone of the earth’s surface). This material no longer can be considered an earthly being, i.e., a living earthly surface dweller or a non-living substance that is constitutive of an earthly ecology that supports life on the earth. This material is from somewhere else than the life-supporting earth-surface, brought to the life-sustaining earth from below it. Fossil fuel, not belonging to the category of “being-earthed”, exhibits its alien intrusiveness in that it is a poison, a destructive substance toward earthly life.

Unlike other human products that are formed through materials intimately connected to a where, this unearthed material has no where. But let us entertain the obvious caveat in the consideration of coal. Anthracite, a contributor to global warming, is mined. The mine is located somewhere. The miners enter the mine; it is a locatable place, the place where a certain group of miners work. And mining is a social form of life based in geographical locales. Humans may indeed form places that revolve around the extraction of materials that carry with them the unearthed characteristic. It is also the case that humans can penetrate the earth and live there for a certain amount of time through technological aids and they can also live in modules in or beyond the sky, *but they do so only on the basis of unearthed forms of energy*. It is only on already unearthed substances transformed into stored energy that humankind penetrates below the surface to obtain more non-renewable, contaminating energy-materials. Peasant mines of old remained near the surface, in the realm in which life takes place. Such mines share the same earthly structure as digging peat, except with the obvious difference of the greater dangers of tunneling into the earth. But then there is surface mining. The thesis concerning materials taken from outside the zone of life, or as being unearthed, does not seem to hold. But indeed it does. Surface mining destroys the ecology that supports life leaving in its wake a dead zone, “a moonscape”. The same holds for mountaintop removal. But mountaintop removal is worse in that it also destroys the surrounding ecology. Unearthing then also involves removing the life-supporting earth, that is, literally, its surface.

But then it appears that precious metals are also unearthed, so we must look for a further distinguishing characteristic such that the meaning, “being unearthed” does not pertain to them. Gold and silver are elements and can be found on the earth’s surface in streams, for example. Still petroleum too finds its own way to the surface and pools. Yet, gold or silver is not something that is used to unlock energy and store it. In making things from them, we can say that the goods made come from some place, for they exhibit certain qualities on the basis of a place-based culture, e.g., the gold objects of the Aztecs. Such goods are rooted through the poiesis, or the bringing forth of things that gather a world. And in traditional cultures poiesis reflects their earthbound identities. So, “of-the-earthed” signifies something that is amongst the entities of the earth that have locatable, natural places. And these are parts within the *Umwelten* of a myriad of living beings. “Not-of-the-earth” as “unearthed” signifies materials that are not found in life-supporting layers and do not sustain healthy ecologies supportive of the myriad of *Umwelten* of lifeforms.

Auto-mobility is the achievement of fossil fuel technology. Auto-mobility has been made possible on the basis of an unearthing and through energy transformations unearthing is made into a spatializing/spatialized patterning of life. Unearthing is a characteristic of the way of Being or essence of automobility.

4.2. “Ether”—Metaphor for the Material Basis in the Operational Flow that is Characterized as Unrootedness

Fuel is used up while functioning as the operational condition for the machines of the modern world. Stored energy is “an ether” that allows for the possibility of the mechanization of the modern world to be spatially organized [21]. It is true that food is used up and provides energy too, but it

functions also as an end in itself; it is not merely ether (transformative reductive function) for the possibility of life, but one of its fundamental experiential enjoyments. And more importantly, foods, in traditional cultures at least, are rooted to socio-geographies. But by being stored energy, fuel functions much like money in its unique ideality—it is not a being amongst the beings that are subject to its agency. Money functions as “the ether” that sustains the flow of value exchange; fuel is the ether that sustains the material flow of modern industrialization. “Ether” is to be understood as an “unrootedness”, i.e., a non-qualitative agency that pervades the relationship of all material entities, just as oxygen pervades the space of living things. Air has no locatable source for it is to be spatially ubiquitous. By contrast as Marxist geographers and historians have so well shown, capitalist material flow is unevenly distributed [22]. Qualitatively differentiated value-objects in the system of goods are reduced to the value-assignments of quantities in the system of money in order to induce economic flows of exchange. This economic flow depends on a material condition for its spatialization. Automobility supplies this spatial flow. The speed of automobility is commensurate with the flow of a money economy. Automobility is directly related to capital’s need for a spatial fix [23] (endless growth in order to create surplus value in an irrational cycle of wealth-creating production), which is the driving force behind globalization.

We thus recognize that the unrootedness of fossil fuels is the necessary material principle of the automobility of modern life. The burning of fossil fuels, the necessary catalyst in the emergence of the modern flow of material culture, maintains and spreads the principles of being unearthed and unrooted. Thus, automobility entails these principles of being unearthed and unrooted. As automobility is hegemonic, unrootedness pervades and subjugates all entities.

4.3. *The Leveled*

The modern world “levels” the place-character of life through the automobility of material culture that has been made possible by the stored energy potential of fossil fuels. Leveling is defined as the devaluing of spatially inscribed qualitative differentiation. The flows of goods made possible through the spatializing ether of fossil fuels allow for locale-transcendence. A single unearthed, unrooted material, fossil fuel, sounds innocuous, except for the fact that as stored energy it transforms all of culture in its image, especially manifest through revolutionizing transport. Stored energy allows for the automobility of all goods, which alters life foremost on the basis of revolutionizing spatiality. The transport capabilities of automobility “level” the placed-based character of goods. Goods can be brought from anywhere to any-other-where. The produce grown five miles away can be presented alongside produce brought from across the globe. Material objects from far away lands are no longer exotic, but common place, and the local ecology does not appear so important, because the local can be inundated with every other locale, which is a mere physical marker on a flowchart. Petroleum-based products can come from Thailand, (toys from McDonald’s Happy Meals) along with some sort of beef product from agribusiness cows in newly formed pastures on land once Brazilian rainforest that are fed with genetically altered foodstuffs from some chemical company in New Jersey. No locatable real place need be the source for any of these products. The perfection of neo-liberal economics is for the unrooted flow of goods, which can be made anywhere and marketed anywhere. The earth is forced to

function as merely a neutral grid for the flow of auto-mobile commodities. This leveling flow of auto-mobile goods constitutes the dis-valuing of the place-being of material culture. There is another aspect of leveling that we have mentioned: those products that are made through mixture with the unearthed materials—plastics, various synthetic products, metals, etc. Where do such products come from? Geography has no relevance in their material production. Petroleum-based products, being artificially-formed are only possible on the basis of the admixture of unearthed material, take on the quality of being unearthed. These products formed from unearthed materials are immediately unrooted. Does it matter where your petroleum-based products, such as cellophane, are made? Still another aspect of leveling comes from automation. Do you have personal relationship with the machines that make your goods, or provide your service at self-check-outs? And even if you engage a person, there is no place-based relationship that they have with the goods they sell or the companies for which they work.

Fossil fuel energy is the material condition for modern technology's rendering of the natural world as a mere resource for creating the standing reserve necessary for automobility. Nature is to be ordered about according to the need of the requirements of an auto-mobile material culture. "Orderability" is indicative of the non-autonomy of automobility, for the Being of natural entities is erased and becomes standing reserve waiting to be ordered about; entities as standing reserve are on call as non-renewable energy orderings serving the auto-mobile function. Automobility is a totalizing ordering, an ordering that includes humankind. By being ordered about in the image of automobility, there is no autonomy; humankind as automata are unfree and this unfreedom as a way of Being leads to the "de-struction" of the earthed. The self-moving machine technologies along with their auto-mobile loads order life on the basis of converting fossil fuel into energy for the unearthing, unrooting, and spatial leveling of all of the materials of the earth. So by the unearthing of fossil fuel everything is ordered about according to its Being, resulting in the dissolution of the earthly characteristics of being-earthed, rooted, and qualitatively differentiated on the basis of spatially inscribed environmental niches. This way of life is unsustainable.

4.4. De-Geographication as the Being of Automobility

The manifest (not concealed) characteristic of all of the products involving fossil fuel energy is automobility. Automobility is the spatial dimensionality of the Being of industrialized life. The unconcealment of the setting-upon that auto-mobilizes entities upon the life-supporting zone of the earth has exhibited the essential characteristics of: unearthing (that which is brought from non-life supporting zones to life supporting zones); un-rooting (no meaningful geographical origin—"from anywhere, to anywhere, for anywhere"); and leveling (equivocation of object qualities on the basis of eradicating spatial differentiations). We can call this auto-mobile aspect of the setting-upon that spatializes the interpretation of nature as standing reserve, "the de-geographication" of the life-supporting earthly surface and the myriad of entities and the ecological interrelations that constitute its materiality—meaning the eradication of earthly spatially inscribed meanings. The essence of automobility then is the de-geographication—unearthing, unrooted, and leveling flow—of modern material culture. Let us be clear about the legitimacy of using this new concept. 'Geo' meaning earth, 'graphein,' meaning to inscribe, and what is being inscribed is earthly meanings. 'Ic' means pertaining

to, and 'ation' referring to the process of. The spatial characteristics of earthly inscription are: being earthed, i.e., a relationally contextualized entity or relational pattern belonging to the life-supporting surface of the earth; being rooted, i.e., having a spatially located origin upon the earth, a whereabouts, due to a natural niche and or the cultural contextualized in that natural niche involving a poietic bringing forth of a thing that "speaks" of its origin as gathering a world that is earthbound; and differentiation, i.e., maintaining qualitative differences on the basis of spatial origins, reflecting the ecology that supports it. Sustainability requires a new relation with geographication—a new relation because auto-mobile technologies are not to be eliminated, but rather radically reconstituted so that a new paradigm of sustainability that re-inscribes geographication can be concretely realized.

4.5. *Uprootedness: The Way of Being that Challenges Humankind*

What about humankind? Humankind engaged in, subject to, the orderings of automobility becomes automata-like. But in terms of spatiality it is to be characterized as uprootedness. Human beings need an existential foothold, a concretization of existential spatiality. But the spatial transformations of the auto-mobile culture result in the loss of place, the loss of the sense of place, disorientation, displacement, endless movements with no "differentiated wheres" to go. The literature abounds with the disappearance of human-scale, human-friendly landscapes at the same time that humanity has all but destroyed "natural landscapes". As the modern landscape becomes more and more homogeneous through globalization, the moving to and fro, the "freedom of" movement of the auto-mobile age becomes utterly insipid and intolerable as we are ordered about in its time consuming flow. This uprooting (from place and thus a loss of identification and orientation) in which we find ourselves ordered about like the entities of material culture is exactly what keeps us on the move, for to stay put is to become aware of the poverty of auto-mobile spatiality, while it is necessary to engage automobility in order to conduct everyday life. So we participate in the spatial flow of its functional demands and let ourselves be consumed by its frenzied orderings as a consumer of auto-mobile material culture. The way of Being that calls on humankind to challenge the earth to be ordered through automobility is an uprooting of ourselves as our lives are organized in its image while we engage a plethora of mobile machines destroying place-Being. An essential characteristic of the modern challenging forth of man is uprootedness. Because humankind engages in automobility human being is uprooted and the automobility maintains an un-free relation to an ecology subject to de-geographication. Our uprootedness alienates us from the earth and this is why we have done so little about the environmental crises. By being alienated from the earth due to the uprooting of automobility, we are neither attuned to the needs of the earth nor to our own needs as earth dwellers.

What calls on humankind to eradicate earthly spatial meanings? The same meanings that constitute the modern science paradigm of a quantifiable mechanical universe—*progress understood to be the quantifiable increment*. The more material culture, the faster material culture, the highest GNP, the bigger burger, the more TV shows, the more automobiles sold, the more money made, the most efficient beer can plant, all constitute progress. Globalization insures that material culture gets bigger, gets faster, gets richer, gets jazzier, etc. All of this is spatially constitutive of automobility, its unearthing, its unrooting, its leveling, and our uprooting follows from the mechanization of motion and

its accelerating progress of quantitatively incremental additions and subtractions. As automata of automobility, humankind measures the matter in motion of material culture and the more and the faster of its flow is the progress that blinds humankind to the destruction of its Being—de-geographication. And even in the face of its symptom, global warming, one of the famous automata by the name of Al Gore, stills cannot resist its ideology.

4.6. Historical Phases of De-Geographication as Concretely Lived: The Automobile as Exemplar

In order to engage in automobility, concrete landscapes must reflect its meaning. So, the operation of auto-mobile machines requires the complementary spatial organization of an auto-geography—the unmoved organization of space that allows for movement. What first had appeared as an advantage in all phases of auto-mobile implementation becomes neutralized as the geography of everyday life expands accordingly as the spatio-temporal features of automobility allow and require it to do so. Spatial expansion and organization then takes on the image of auto-geography. Thus in accommodating automobility, what first appeared as an advantage then appears as an average necessity as landscapes are fitted to its proliferation. Automobility as a concrete manifestation of human spatial organization per se then requires human modalities of daily life to submit to that necessity, which is implemented in planning, zoning, codes, and laws. In submitting to that necessity, life is forced to follow “the road” of auto-geography, the ubiquitous asphalt that transmogrifies the earth. Human life and its landscapes are made in the image of automobility and become automata-like. This restructuring only seems continuously advantageous on the basis of continual spatial expansion, where indeed those who get to the latest suburb or industrial park first, enjoy a moment of having escaped or of entering new territory. But these “running away from” and territorial-conquest syndromes of automobility are not very successful for long yet are still much of the practice, even though the instant environment machine puts up a new auto-geography “overnight”, selling new “hideaways”. The expansion of the human landscape on the basis of automobility really shows nothing but short term advantage. Instead, it has shown itself to be a huge unsustainable waste that now blankets whole countries. And at this point of geographical saturation coupled with the end of cheap energy, a further degeneration from necessity to wholesale disadvantage becomes manifest.

These structural changes can be illustrated on the individual level. In the early years when the automobile first became available to the middle class, the ownership of a car allowed people the advantage of moving out of the city, for they could travel greater distances in a short time. Thus automobilists could live in the bucolic country, not pay city taxes, and still enjoy the amenities of the city in terms of livelihood and culture. As the autoscape accommodated this pattern as a form of spatial organization, it soon became a necessity to travel the many distances in short periods of time. As satellite patterns of spatial activity became the norm, distances for all of life’s activities became more spread out and isolated. On the very basis of auto-geography no time is saved, just more time necessarily spent traversing the autoscape. The auto-geography destroys the lifestyle advantage that characterized the appeal of automobility. The bad aspects of city-life are combined with the bad aspects of country life marrying the cultural vacuity and inconvenience of the country with the crowding and loss of the natural setting of the city. This first became obvious with the building of suburbs for the

working class, where look-alike houses were planted overnight on postage stamp lots, which ate up miles and miles of once ecologically viable land. As further implementation of the autoscape is accomplished the quality of life is further impoverished, for there are no alternatives and the intensification of the auto-geography empties out the possibility of other modes of life.

These structural changes can be illustrated on a business level. Those companies that took advantage of automobility could expand their business transactions beyond their competitors keeping a quicker pace while doing business at greater distances. As the auto-geography accommodated automobility it became a necessity to include automobility in the structuring of business, both as a spatial requirement and a requirement of competition. To compete businesses lose their rootedness in communities and instead must enter into a non-local economy of abstract markets envisioned on the basis of auto-mobile flows. Business is forced to compete at global levels, which squeezes out businesses that try to be place-based, which destroys local economies. The result is a non-human scale in which business has little rootedness to the life of a place. In fact landscapes themselves are nothing more than possible sectors to fashion instant environments. Economies need not organically grow; auto-mobility allows for instant worlds to be created anywhere. But in light of the energy crisis automobility becomes a disadvantage, yet the infrastructure to do business demands it. And the ubiquity and entrenchment of this infrastructure means that global warming will be a harsh reality.

5. Conclusions

Automobility has not led to a qualitatively better life, unless one believes that the increase in material consumption at the expense of the environment and traditional human cultures constitutes quality of life. Our culture maintains that it has only because it is the fabric of material conditions that seemingly have made life easier, at least for some. But for sustainable ways of life, material conditions must be radically altered in a way that dramatically curbs automobility—leading to a qualitatively better life without the endless consumption made possible by the spatial flows of automobility. Rethinking spatial flows is necessary for a sustainable world because automobility is not friendly to non-human environments and ecosystems, the atmosphere, and whether we recognize it or not—its de-geographication destroys human environments. In the long run it has neither proved to be expedient nor conserving. Automobility constitutes a non-sustainable mode of spatial organization. To make this claim is not to renounce automobility. Rather, to implement the paradigm of sustainability requires that we will have to thoroughly rethink the role of automobility in a radically re-organized space to which earthly functions other than the non-earthly machine will be served.

Further discussion of how automobility has affected the various interrelated aspects of life is the next step in this discussion. But such a step would not issue from a deep enough reflection without first this Heideggerian turn to look for truth beyond correctness, to ask about the way of Being that claims humankind, which as a modern scientific hubris has exhausted itself in the near destruction of the earth. And, we have had to uncover the spatiality of enframing, automobility, and the essence of automobility, de-geographication. Yes global warming is the obvious manifestation of dangerous environmental problems, but the essence of automobility is the deep source of a way of Being, a spatial manifestation of the interpretation of our own Being. So new technologies are not the solution, but

rather they shall continue to be a manifestation of a much deeper destruction if we remain within the present paradigm. We must give ourselves over to critical reflection, not to the instrumental rationality of techno-thinking. Sustainability is nothing less than a new interpretation of our Being, a new way of Being that can claim humankind if we open ourselves to it.

Acknowledgements

I would like to thank Loyola College in Maryland for providing to me funds so that I was able to participate in the Oxford Round Table in the summer of 2008. This article has been developed from my presentation.

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18. Casey, E.S. *Getting Back Into Place: Toward a Renewed Understanding of the Placed-World*; Indiana University Press: Bloomington, USA, 1993.
19. Backhaus, G. Introduction: Forming the Interfacing Model. In *Colonial and Global Interfacings: Imperial Hegemonies and Democratizing Resistances*; Backhaus, G., Murungi, J., Eds.; Cambridge Scholars Publishing: Newcastle, UK, 2007. See especially the subsections, “The Globalizing Process” and “The Colonizing Process”, pp. xxi-xxiv, for examples of cultural spatializing/spatialized processes.
20. Backhaus, G. Introduction I: The Problematic of Grounding the Significance of Symbolic Landscapes [and] Introduction II: An Apology Concerning the Importance of the Geography of the Imagination. In *Symbolic Landscapes*; Backhaus, G., Murungi, J., Eds.; Springer: The Netherlands, 2008; pp. 3-32, 205-226. There is no way around meanings. There is no way around symbolic meanings. And all meanings are generated from the precognitive ambiguous interrelational field between the lived-body and the EarthBody.

21. Simmel, G. *The Philosophy of Money*; Frisby, D. Ed.; Bottomore, T., Frisby, D., Trans.; Routledge: London, UK, 1991; p. 130. “Only money in terms of its pure concept, has attained this final stage; it is nothing but the pure form of exchangeability”. Money is the ether that allows for the elimination of use-value in a system of exchange-value. Automobility is the ether that allows for the elimination of place-Being in an abstract system of spatial flows.
22. Zukas, A. From Farmsteads to Slag Heaps: The Restless Ecoscape of the Ruhr Valley. In *Ecoscapes: The Geographic Patternings of Relations*; Backhaus, G., Murungi, J., Eds.; Lexington Books: Lanham, MD, USA, 2006; pp. 139-164. See Zukas for a good illustration of uneven capitalist economic flows and their destructive hegemony.
23. Harvey, D. *Spaces of Capital: Towards a Critical Geography*; Routledge: New York, USA, 2002. See Harvey for a brief exposition of capitalist spatial production.

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