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Climate change, growth and sustainability: the ideological context

Nick Brooks

Introduction

It is widely accepted within the climate change research community that climate change should be addressed through a combination of mitigation and adaptation. However, within government and society at large the costs of mitigation and adaptation, and consequently the extent to which these strategies should be pursued, are hotly contested. The uncertainty surrounding both the science of climate change and the costs of planned responses to it is often used as a justification for inaction. It might appear that uncertainty and the costs and benefits of various responses to represent the entirety of the climate change debate. However, we should also recognise the role of ideology and the various philosophical contexts, which are often ignored, but which are often crucial determining people's attitude towards environmental issues. This paper argues that real progress in addressing climate change will be greatly assisted if more attention is paid to the role of different world views in framing the debate. Policymakers and the public will be in a better position to formulate their own opinions and make decisions if they are able to distinguish the scientific elements of the debate from the ideological elements, and recognise when "scientific" data are being manipulated for ideological purposes. An appreciation of the ideological and philosophical backgrounds of the various protagonists in the debate is helpful, if not essential, in interpreting the various arguments. This is equally true of arguments over "sustainability", a much more slippery concept than climate change, dealing as it does not only with scientific measurement and future development scenarios, but also with the valuation of natural resources in both financial and non-financial terms.

Preferences and policies

The role of the scientist is increasingly to provide policy-relevant information and recommendations to government. Politicians are notoriously bad at dealing with scientific uncertainty, and when faced with it are prone to use science selectively in order to pursue preferred policies based on non-scientific criteria. As a result scientists are pressured to make value judgements on the desirability of a particular course of action rather than simply provide scientific data on which others will base policy decisions. This trend is becoming more pronounced as governments address environmental issues of regional and global importance. While the judgements of scientists may be informed by objective analysis of the physical world, they are also informed by subjective factors.

All policy decisions are ultimately subjective, and are based on what the decision-maker wants, mediated by the information available to them regarding the best way to achieve a particular policy outcome. There may be broad agreement among individuals and groups as to what constitutes a desirable policy outcome, but any given decision, however sensible it may appear to the majority, will nearly always be met with dissent from some quarters. Nonetheless, human beings have a tendency to believe in the correctness of their own views, and often find it difficult to believe that other human beings (at least sane ones) might disagree with them. To many people the need for the development of sustainable ways of living and the need to prevent dangerous climate change are self evident. Such a belief is at the heart of many non-governmental

organisations, research institutes and even branches of government.

There are two major problems with such beliefs. The first is that terms such as "sustainable" and "dangerous" are often not clearly defined, leading to differences of interpretation and difficulties in communication. The second, and perhaps more difficult to address, is the assumption that everyone else shares those beliefs. These problems are of course related: what is sustainable or dangerous for one group may not be for another group. The mistake that many people make is to think that a group that believes it will not be adversely affected by a particular process will care about a group that will be. Climate change is a good example of such a process. Most of the resistance to tackling climate change comes from the rich industrialised world, where people are on the whole not used to dealing with climate-related disasters. When a climate disaster does occur in a rich country the tendency is to for people to blame the government for not protecting them. In other words the deciding factor in determining risk is government competence rather than the nature of the environmental hazard in question. This attitude contributes to the lack of concern (beyond the occasional televised appeal for relief aid), and the absence of any feeling of responsibility, for the plight of those in the developing world who are most likely to suffer the adverse effects of climate change, at least in the short to medium term.

Those who argue for sustainable development and action to reduce the negative impacts of climate change, and those who argue against, are often not in disagreement as the result of differences in opinion over scientific, or even economic matters. Their differences in opinion are more commonly the result of differences in moral preference and world view. Debates concerning how societies choose to develop over the coming decades will only be transparent when these fundamental differences in world view are openly acknowledged. Scientists will only be able to offer objective policy advice (and do so with a clear conscience both as scientists and human beings) when they recognise the role of their own world views in framing this advice. Governments will only be capable of pursuing consistent policies and successfully implementing those policies when they have a coherent vision of the overarching developmental preferences of the societies they represent.

Spectra of preferences: a starting point for discussion

In order to achieve transparency in the climate change and sustainability debates, the ideological and philosophical contexts of the arguments must be understood. This will enable those who wish to follow the debate to decouple the ideological from the scientific content. Unfortunately our culture has promoted a tendency to think only in terms of polar opposites, with the result that those engaging in debates on matters such as climate change and sustainability are currently shoe-horned into categories which we may tentatively label as "environmentalism" or "free-market capitalism". These opposing ideological categories leave no room for those who are concerned about the environment but see the benefits of market-based systems of exchange, or for those who wish to liberalise trade but increase environmental protection. Of course most people are likely to be unclassifiable under this binary system, desiring a balance between economic affluence and the preservation of the environment.

A better way of understanding the role of ideology and preference in the environmental debate is to think not in terms of those who are, for example, pro or anti environment, or pro or anti business, but instead to think in terms of a "spectrum" of views. In terms of approaches to the environment, we might propose a spectrum ranging from "deep green" to "maximum growth". A deep green philosophy would involve the minimisation of consumption, the maximisation of environmental protection and rehabilitation, and the existence of the human species in equilibrium with the natural world. A maximum growth philosophy would be one in which the extraction of natural resources and their conversion to products for sale and consumption was maximised, environmental protection minimised, and a needs-based technocratic approach to environmental management adopted. Of

course these are extreme points on the proposed spectrum: between them would lie states that we might call "light green" (e.g. an emphasis on environmental quality and quality of life rather than economic growth, within a regulated market-based system that permits individual enterprise) and "optimal growth" (maximum possible growth without the crossing of certain thresholds of environmental deterioration).

The utility of such a framework is that it enables researchers and other actors to critically assess their own and others' philosophical starting points in the environmental debate. It also allows researchers, policy makers and other actors to ask themselves where they are, where they would like to be, where they should be, and where they can realistically get to on the spectrum.

Of course "deep green - maximum growth" is only one example of a spectrum of philosophical approaches that inform the debate on the environment. This spectrum addresses approaches to environmental management, but does not account for the different motivations that might lead people to adopt these approaches. For example, one's position along the spectrum may be the result of a desire to maximise well being for the greatest number of people combined with a particular view of what is feasible in terms of environmental management and social engineering. On the other hand a position on the spectrum may be the result of personal preference, with little or no regard for the wider (global) human impacts of the preferred model. Another spectrum of beliefs would then be necessary to examine motivation by representing the extent to which individuals value human life.

The deep green - maximum growth spectrum describes the extent to which natural resources are extracted and converted into consumable products, and may be viewed as a spectrum of sustainability *as defined for a closed Earth system*. Other spectra might be desirable for a fuller description of a socio-economic system and its relationship to the environment and global (and also national within a state context) human population. For example consideration for others might be described by a spectrum ranging from radical individualism to highly developed communalism via varying degrees of social responsibility. The role of technology might be described by a spectrum ranging from technocentrism to ecocentrism. Technology might be the principal driver of (unplanned) social and environmental change (technocentrism), or it might be limited in its application to the preservation of the environment in an ecocentric model. This formulation is potentially problematic, as will be discussed below.

A number of axes might be used to represent a variety of spectra in a *profile* of a society. The choice of spectra and the construction of such a profile should be given careful thought, as the various spectra are unlikely to be completely independent. For example, a maximum growth world, particularly one extrapolated from current geopolitical conditions, is likely to emphasise individualism and be associated with technology-driven change. A choice of position along one axis may limit the possible range of movement along another axis, providing an interesting challenge for social scientists and those involved in the modelling of social change.

Maximum growth versus deep green: the ideology of extremes

In order to understand current conflicts between the so-called "environmental movement" and the supporters of rapid economic globalisation based on corporate capitalism, it is informative to explore the extremes of the deep green - maximum growth spectrum. This is not to cast this conflict as one solely between these extreme positions, although it may be convincingly argued that many of the protagonists hold opinions close to the extremes. An examination of extremes serves to expose certain strands of belief that may have varying degrees of influence on the attitudes of those at various points on the spectrum.

The philosophy of growth at all costs is currently most strongly associated with "sink or swim" capitalism in which individual enterprise is sacred and in which the proper role of the state is to facilitate innovation rather than provide for the needy. In this world view success and virtue are measured in terms of wealth and the poor are often viewed as victims of

their own laziness and ineptitude. It is therefore unsurprising that many of those who adhere to this extreme philosophy are often unconcerned with the plight of those living at the margins of society. As wealth creation is virtuous, it cannot possibly be held accountable for problems such as climate change. This ideological position often leads to the belief that the science must be wrong, or that it has been manipulated in its interpretation for ideological reasons. If, on the other hand, the science is not wrong and anthropogenic climate change is a reality, economic growth, innovation and new technology will inevitably provide us with the means to confront it successfully. An argument put forward by some proponents of this extreme view is that climate has changed in the past and humanity has managed adapted to it. Successful past adaptation is emphasised, and failure to adapt is played down or denied. This approach seeks to deny any potential risk associated with climate change, either by denying its existence or by assuming that growth and innovation lead to "perfect" adaptation. It might therefore be described as "faith-based economics". This philosophy of growth is a product of the Enlightenment notion of the inevitability of linear progress, which itself derives at least partly from the Christian notion of an ultimate resolution to human affairs. However, faith-based economics replaces faith in God with faith in the market; while its adherents may (or may not) have turned their back on the belief in a deity, they retain the philosophical baggage of western Christianity, in which tradition this understanding of the world is firmly rooted.

The faith-based approach to economics is only one way of justifying the maximum growth philosophy. An alternative model, more scientifically realistic but much more morally ambiguous, is the social or economic Darwinian approach. This model recognises that climate change has actually stimulated human innovation throughout history and prehistory; a lack of change will result in a sterile society in which innovation is suppressed. While such innovation might be associated with widespread loss of life and environmental degradation, this is seen as the acceptable price of progress. The notion that (climate) change will stimulate innovation and development, forcing us to develop new technologies, resonates with the concept of "creative destruction" that is popular in the supporting literature of free-market capitalism. This is analogous to the Marxian idea of permanent revolution. This should not be surprising given that capitalism, Marxism and communism are all products of the western European Enlightenment, and are based on a belief in the inevitability of linear progress.

Faith-based economics is a utopian model associated with a belief that growth and innovation produces incremental improvements in quality of life and will ultimately enable the developing world to "catch up" with the industrialised world. It is less inclined than the Darwinian to accept economic growth as a phenomenon that relies on structural inequalities between economic centres and peripheries, and is more likely to ignore or deny the risks associated with climate change. The followers of faith-based economics are more likely to believe that growth can continue indefinitely within a closed physical system as a result of added value deriving from intangible factors, as epitomised by the dot.com bubble of the 1990s. It tends to ignore the interface between human society and the wider physical environment, or view issues of environmental management in terms of reflexive technological responses to environmental problems.

Economic Darwinism on the other hand is more willing to actively engage with issues relating to the physical environment, but it does so in a "promethean" fashion, based on the assumption that humanity can and should engineer the physical world to its own advantage. While it is more likely to acknowledge the risks associated with environmental change, it is willing to accept these risks as drivers of innovation, rather than as problems simply to be solved in order to maintain the *status quo*. Whereas faith-based economics maintains that growth will benefit the entire human race, economic Darwinism is more concerned with the survival and "improvement" of the human *species*, and is thus prepared to accept losses. Economic Darwinism is more likely to be associated with a willingness to actively engage in large-scale planetary engineering and the expansion of human settlements beyond the planet Earth,

recognising the fact that we are currently living in an effectively closed physical system. While both of these philosophies view technological innovation as central to growth, the Darwinian model places a somewhat different emphasis on the role of technology, an emphasis which is resonant of the promethean attitude of communist systems, which have traditionally (but often disastrously) used technology to dominate the physical environment in pursuit of agricultural and industrial productivity. In this sense socialism has been as obsessed with economic growth as have the capitalist societies that opposed it, again pointing to the common roots of the two systems, which have essentially the same stated objective (economic productivity and the ordering of society for the benefit of the people) and merely differ in approach.

Of course the distinction between faith-based economics and economic Darwinism is somewhat artificial, and the two models tend to coexist uneasily in the overarching ideology of economic growth.

Deep green ideology is based on the notion that humanity should coexist with nature and have as little impact on the Earth as possible. In contrast with the maximum growth philosophy, in which consumption and innovation form a virtuous cycle, consumption is minimal and innovation is regulated, viewed in purely utilitarian terms. As opposed to constant change in pursuit of linear progress, the deep green philosophy seeks an equilibrium between humanity and the natural world, and is therefore based on stability rather than change. This raises an interesting problem in relation to climate change, namely that the dynamic nature of the climate system (whether as a result of anthropogenic forcing or natural variability) mediates against long-term stability in local systems involving human-environment interaction.

The tension between faith-based economics and economic Darwinism is reflected to a certain extent in the deep green model. The deep green approach may accommodate a philosophy that seeks to provide justice and quality of life for all in a sustainable global ecosystem that includes a large human population. In this model the challenge is one of minimising the impact of such a population on natural systems through effective environmental management and strict limits on human exploitation of natural systems. In this model the central problem is one of philosophy and approach to the environment.

Alternatively the deep green model may be associated with a belief that the world is overpopulated and that it is this high population that is at the root of many environmental problems. In this case it may be necessary to dramatically reduce the human population in order to achieve sustainability. This approach is associated with Malthusian attitudes to demographic growth and notions of a fixed carrying capacity of the Earth, views of the environment which are still popular, although they are being challenged, particularly in the debate over land degradation.

The deep green philosophy also accommodates quasi-religious elements, particularly the treatment of the Earth as if it were a deity. The “Gaia” hypothesis, while it is a valid scientific model of the linkages between different elements of the global biogeophysical, system, lends itself to quasi-religious interpretation by virtue of its title, which harks back to pre-Christian naturalistic belief systems. The religious framing of a deep green philosophy might lead to an acceptance or even a welcoming of environmental catastrophe as a prelude to the establishment of an “ecotopia”, particularly in western societies where it may be blended with apocalyptic elements of the Judaeo-Christian tradition. Environmental catastrophes might be seen as nature punishing humanity for its environmental transgressions, and the concept of “nature’s revenge” is apparent in some of the language of contemporary environmental literature and the media.

The deep green approach may also be seen in terms of a return to the values of ancient systems of religious belief based on naturalistic polytheism that predated the invention of monotheism. The former was to a large extent a means of rationalising the world that associated certain deities with specific natural processes and/or specific locations. In these belief systems deities were given human attributes and did not necessarily behave in a moral

manner; the function of naturalistic polytheism was not necessarily to prescribe morality. In early naturalistic religions the distinction between the physical and the spiritual world was blurred, and such a distinction might even have been meaningless. The purpose of religious activity was largely to interact with and exert influence over the world at large, including its "spiritual' and "physical" elements. Religious practice therefore encompassed environmental management via appeals to the deities that governed the natural world, and through interaction with the spirits associated with various aspects of it. Ancient Egypt and Mesopotamia provide good examples of such belief systems.

Monotheism to a large extent divorced religious worship from the natural environment, and sought to impose a particular morality on human society. The dichotomy between naturalistic polytheism and ethical monotheism may be traced to the beginning of the Judaic tradition in the Near East some three thousand years ago. The other ancient religions of this region "without exception regard the earth as a divinity, and the sky as a divinity, the gods are immanent in nature and render it divine." (Moscati, 1960, p 224). By contrast in the new Judaic religion "there is only one God, and this God is outside and above all nature, which He himself created. Nature is subordinate and of short life in relation to its Creator. If it has any function of its own, it is to express the glory of God. The position of man is completely analogous: he draws his origin and destiny from God." (Moscati, 1960, p 224).

The current conflict between those who wish to dominate the natural world and those who wish to live in harmony with it might be seen as the latest phase in a conflict between ethical monotheism and naturalistic polytheism. However, it is no longer strictly a religious conflict, but rather a conflict between philosophies that have emerged from these two competing religious models. Faith-based economics and economic Darwinism are both firmly rooted in the western European Christian tradition. While they may be allied to the muscular evangelical Christianity of the present-day United States, they are not synonymous with Christianity, but rather the result of the grafting of elements of Christian theology onto the physical and social sciences and the discipline of economics. The assumptions on which these economic models are based may be traced back to the advent of monotheism, but are the product of millennia of philosophical evolution.

Likewise, the deep green philosophy may be seen as a world view that partly derives from and partly harks back to naturalistic polytheism. Within the historically Christian world, the moral elements of ethical monotheism have been added to this philosophy (nature is seen as "good" and those who destroy the natural world as "bad"), as has the use of science in order to understand humanity's relationship with the natural world. Indeed, scientific understanding of human impacts on natural systems has done a great deal to encourage the development of the deep green philosophy. The influence of the western European Christian tradition on the development of modern science must therefore also be recognised in the framing of the deep green ideology.

Conclusions

This paper has attempted to dissect the principal ideological and philosophical elements that provide the context for the ongoing debate about the global physical environment and how human society relates to and interacts with it. The intention has been to encourage the participants in this debate to examine more closely their underlying assumptions, and to provide a framework within which a variety of opinions and approaches may be understood. Only when we understand our own motivations and beliefs can we engage in the meaningful dialogue that is necessary at this crucial stage of human history.

By understanding the different ideological positions and how they have arisen, we are in a better position when it comes to assessing potential future societal trajectories, and making choices about those trajectories. For example, we might ask ourselves whether the defining conflict of the twenty first century is likely to be between those who believe in maximum growth and the "deep greens", or between the deep greens and the light greens. Will

those who believe in growth at all costs attempt to drive a wedge between the light greens and dark greens in order to split the "environmental movement"? An understanding of the interplay between different philosophical approaches and different interest groups (often defined to a large extent by their cultural backgrounds) can help us develop scenarios of the future.

An understanding of the origins of different world views reminds us that the current dominant ideology of pursuing economic growth is culturally specific to western European society and its derivatives, and that current conditions are not necessarily the inevitable outcome of linear progress towards a utopian world. While this ideology may have spread to other parts of the world, other cultures have very different views on humanity's relationship with the global environment, and past societies were often run on very different principles to those governing the interactions of humans with one another and with the physical environment today. To a certain extent we can understand the conflict between ideologies of growth at all costs and what we might label "strong sustainability" within the framework of the schism between naturalistic polytheism and ethical monotheism. However, we should not cast this as a religious conflict.

The framework of opposing belief systems, and of spectra of philosophies ranging from one extreme to another, should help academics present the debate to non-specialists, and should help non-specialists sift the ideological from the scientific elements in arguments about processes such as climate change. A recognition of the ideological position of the protagonists will help the public decide for themselves where they stand on important issues.

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References

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