

Environment & Society



White Horse Press

Full citation:

Carter, Alan. "Some Theoretical Foundations for Radical Green Politics." *Environmental Values* 13, no. 3, (2004): 305-328. http://www.environmentandsociety.org/node/5910

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Some Theoretical Foundations for Radical Green Politics

ALAN CARTER

Department of Philosophy Campus Box 232 University of Colorado at Boulder CO 80309-0232, USA http://spot.colorado.edu/~cartera/

ABSTRACT

On the basis of our apparent obligations to future generations, it would seem that we are morally obliged to reduce the risk our environmentally destructive behaviour poses for their well-being. But if, rather than choosing to destroy the environment, we are in fact driven to do so, then any obligation to reduce our environmental impact requires an understanding of the mechanism driving our behaviour. This article argues that the State-Primacy Theory provides a plausible explanation for the nature of that mechanism, and concludes that the most common strategies offered as a response to our environmental impact are most likely to be insufficiently radical to meet our seeming obligations effectively.

KEYWORDS

State-primacy, environmentally hazardous dynamic, future generations, green political theory

I

Imagine that you are passing by a shallow, muddy pond into which a child has accidentally fallen. Because the child is small, she will drown if you ignore her plight. Because you are tall, you could rescue her by wading into the pond. However, because the pond is muddy, were you to go to her aid, you would lose a suit of clothes; but were you not to help her, she would lose her life. Are you morally obliged to come to her aid?¹

Most people agree that anyone confronted with this situation and capable of rescuing the child is morally obliged to assist her. Indeed, most people agree that one would reveal oneself to be a moral monster were one simply to hurry

Environmental Values **13** (2004): 305–28 © 2004 The White Horse Press

past the pond, single-mindedly going about one's business, while ignoring her desperate cries for help.² Most people would also agree that it would be even worse if, rather than the child having fallen into the pond, you (the passer-by) had, for no good reason, thrown her in from the bridge above. For you to have thrown the child into the pond where she will surely die would have been the height of immorality. Moreover, your having thrown the child into a pond when it was not certain but merely highly probable that she would drown seems, at best, only marginally less immoral.

Yet throwing a child into a muddy pond where there is a significant probability that she will thereby die appears to be the moral equivalent of what most of us are currently doing. For if many environmentalists are right, we are acting in such a manner as to compromise the integrity of our planet's life-support systems. To put it graphically, if we are indeed responsible for the degree of ecological damage that many environmentalists claim we are inflicting,³ then we are presently acting so as, in effect, to drown future children in a sea of life-threatening pollution. In the view of many environmentalists, we are so altering planetary life-support systems that we will be responsible for future children finding themselves within an environment in which they will be unable to survive. As many of the future people who would be harmed by our actions may well not even have been born yet, they have yet to perform any actions; and are thus wholly innocent. In a word, we may well be now acting in such a manner that our actions will kill countless billions of innocents - and many of them children at that. What could be more morally monstrous?⁴ At the very least, we seem to be putting the lives of countless future children at risk, which is barely, if at all, less monstrous.

It has, however, been argued that we cannot possibly harm future people.⁵ If one's otherwise harmful action determines the existence of some future person, then she will only exist if that action is undertaken. Were the action not to be performed, she would never exist. Hence, if harming a person is to make her worse off than she would otherwise have been, then any action determining a person's existence cannot harm her, for she would not have been better off had the action in question not been performed. But as all our actions together determine the existence of *every* future person, it seems that we cannot possibly harm any of them.

But were one to conclude that therefore it is impossible to harm future persons (and thus one need pay no regard to any environmental damage one might be inflicting),⁶ one would be confusing what we, viewed collectively, can or cannot do with what we, viewed individually, can or cannot do.⁷ For it is highly unlikely that every one of a person's potentially harmful actions will determine the existence of every future person.⁸ Hence, there will be future persons whom one can harm: namely, those whose existence one does not determine by the specific harmful action that affects them for the worse.⁹ In short, they are persons whom one can make worse off than they would otherwise have

been. But this argument applies to each and every one of us. Hence, the ability to harm future people is one possessed by all of us. In a word, all of us *can* harm future people, and it is only when we fail to individuate our actions that we are misled into thinking that we cannot possibly harm temporally distant others. It is a confusion arising from a common failure to disaggregate. And if one's individual actions will likely lead to the deaths of innocent children, then one is acting monstrously. If this is true of each of us, then we are all acting monstrously. It seems, therefore, that there is reason to conclude that we are no less than morally *obliged* to alter our current behaviour.

However, it might then be objected that, even if, individually, we could harm future people, our governments organise our collective actions, and, collectively, we are unable to harm future persons (for, collectively, we determine every future person's existence). So, as long as any pollution we might emit results from governmental policy, we need not concern ourselves with it. It cannot harm future people, for none of the future persons who will, as a matter of fact, encounter our pollution would exist to be better off had governmental policy been different and had our collective actions thus been less polluting. But when our governments organise our collective behaviour, they do so by enacting policies which each of us may or may not act in accordance with. To think that governmental policy creates a collective action that leaves each of us immune from moral criticism is another case of failing to disaggregate. For, individually, each of us can choose to act in conformity with those policies or choose not to do so. If we, individually, choose to act in accordance with certain policies, irrespective of whether or not the collectivity is incapable of harming future persons, each of us will, individually, be acting so as to harm future people. And if 'I was only obeying orders' won't do as an excuse for past murderers of children, it won't do as an excuse for our actions, either.

So, let us return to the shallow pond. But this time imagine that you haven't thrown the child into it, nor has the child fallen into it. Instead, imagine that as you pass by the pond you observe another adult drowning the child. If the adult is drowning the child for no good reason, isn't one just as morally obliged to wade in and come to the child's assistance as in the case where the child had simply fallen in? Many would think that in both cases one is equally obliged to help her (just as many think that it is our moral obligation to rescue children from the threat of the gas chamber).

Now imagine a slightly different situation. Imagine that the other adult, for no good reason, is, from the bridge above, throwing children into the pond against their wills, each of whom is likely to drown (or imagine that the adult is throwing children into a defective gas chamber which doesn't always succeed in poisoning them). Isn't one obliged to take action to prevent that person from risking the lives of those who might easily drown (or be poisoned)? If one is obliged to intervene, and it seems that this is so, then one's simply refraining from adding to environmental damage would appear to be insufficient. Rather,

it would seem that one is morally obliged not merely to stop polluting but also to stop others from doing so, too. Our moral obligations do not seem to stop with our refraining from harming others ourselves. They seem to extend to an obligation to prevent others from acting in a harmful manner. Indeed, they seem to extend to an obligation to prevent others from acting in a manner that poses a significant risk of harm to others. And if this is so, it would imply that we are all morally obliged to prevent people from compromising the life-support systems of our planet. It appears that it is nothing less than our *duty* to prevent people from risking drowning future children in a sea of pollution (or risking turning their atmosphere into a gas chamber).

But how do we discharge this seemingly pressing moral requirement? If we are all polluting by choice, then it might appear that the best policy is, perhaps, first to try to persuade everyone to change their lifestyles to less environmentally damaging ones. But what if it is not the case that everyone has simply chosen to pollute? What if most of us are driven to engage in environmentally destructive behaviour? This would have profound implications for the strategies we would be morally obliged to pursue in order to prevent needless harm befalling future innocents.

Π

In fact, many think that there *is* reason to believe that people are being driven to engage in environmentally damaging activities. For example, writing in 1981, Tim O'Riordan observes:

The recent reports on the global environmental predicament...pinpoint the fact that a combination of population growth, neo-colonialism, national militarism, and multinational capitalism are both encouraging and forcing third-world economic elites and peasants alike to destroy vast areas of habitable rural and urban land through aggressive over-exploitation and the dangerous addition of chemicals and other pollutants. In the case of many peasant communities, these forces are propelling them to destroy their only real asset – their land – often against their better judgement and certainly against their will.¹⁰

And among those who think that individuals are being compelled to engage in environmentally destructive behaviour, most are convinced that it is the prevailing economic system that is ultimately responsible. In their view, if anything is driving us to act in a way that is likely to prove so harmful to future persons, it is the global structure of economic relations.

After the theoretical ascent of Marxist theory and then the rise of neo-liberalism, it is widely taken for granted that the explanation for key aspects of social behaviour is economic. But there are grounds for thinking that the best explanation for such behaviour lies elsewhere. Consider one candidate for why many people are driven to participate in environmental destruction – perhaps the best candidate seemingly supporting an economistic account – namely, the burden imposed upon many of the world's poorest people by Third World debt.

There appears to be little doubt that the need to repay the debt is forcing Third World peoples to degrade their environment, whether in the form of accepting toxic waste from the developed countries, or chopping down their rainforest to export hardwoods, or in the destruction of their topsoil through maximising in the short term the production of cash crops, or in agreeing to the introduction of highly polluting industries, owned by foreign corporations, with minimal, if any, environmental regulations governing, for example, the emission of pollutants. This appears to be a clear case where the fundamental explanation for environmental destruction is economic. But it is less clear that this is so when we dig a little deeper. Consider two questions: (1) How was the debt incurred? and (2) Why did it become so pressing?

Regarding (1), there are certainly many factors lying behind the growth of Third World debt, but nevertheless there appears to be a clear correlation between the size of any country's debt and the level of its military expenditure.¹¹ Indeed, as one authority on the debt observes: 'It is not coincidental that those countries that today find themselves in the deepest debt trouble were those that yesterday bought the most weapons.'¹²

Regarding (2), while in 1986 Third World debt exceeded \$1 trillion, in the same year the United States' public debt exceeded twice that amount.¹³ A major reason was, of course, the massive military expenditure authorised by the Reagan administration. In order to borrow the money to finance perceived military requirements, the US government had to offer very high interest rates to attract sufficient investment.¹⁴ But in order for the private banks to keep up, global interest rates rose. And that resulted in Third World debt suddenly being subject to exorbitant interest rates and Third World peoples' suddenly facing crippling debt repayments. In short, lying behind the obvious economic facts there seem to be deeper and potentially more disturbing political ones.

Consider another case where the core explanation would appear, at first glance, to be an economic one. It seems clear to many that the recent history of the Third World is one of international exploitation. Poorer countries appear simply to have been at the mercy of transnational corporations located in richer countries, who, it would seem, have systematically extracted capital from the poorer countries. Indeed, in the eyes of many, Third World governments appear to be nothing more that the puppets of transnational capital.

But there is reason to think that they are far from being the mere tools of, say, transnational corporations. For example, Bill Warren notes that

Third World states have shown the ability to take punitive action against foreign firms located in their territories, e.g. the forcible nationalisation of oil in Iraq, Egypt's nationalisation of the Suez Canal, Uganda's...take-over of British assets,

the often unilaterally declared acquisition of majority share-holdings in foreign firms, such as timber and mining in Ghana.¹⁵

While according to Stephen Krasner, governments in the Third World 'have promulgated rules regarding the establishment of affiliates, repatriation of profits, debt financing, transfer payments, employment of nationals, disclosure of information, and tax rates.'¹⁶ It is doubtful that these are courses of action which the mere instruments of transnational capital would embark upon.

But it would seem that Third World states cannot be the mere tools of indigenous capital, either. For as Teodor Shanin observes, Third World states have, occasionally, 'produced class structures, transformed them, or made them disappear, as when a bourgeoisie or a peasantry has been created by deliberate state policy, as in Kenya, Pakistan, Tanzania, or Brazil.'¹⁷ It is doubtful that the state is the mere instrument of the dominant economic class within its territory if it chooses to bring into being a new dominant economic class. This observation would seem to undermine any assumption that the state is merely the instrument of the economy – a view predominant in both Marxist and neo-liberal theory.

But if states have, at times, chosen to bring about a new class structure within their own territories, and have, at times, allowed the extraction of capital from their territories,¹⁸ why have they, at other times, taken, or more often threatened, punitive action against transnational capital? The most promising answer would seem to lie in regarding states as actors whose interests are best promoted, depending upon the circumstances, by these various courses of action. For example, if a state needed to increase its revenue, then were a new class (say, a bourgeoisie) better able to generate wealth, that state would have an interest in bringing such a new class into being. And if a state has, as many Third World states do have, difficulty in obtaining revenue because of a largely informal economy, then tariffs on the trade generated by transnational corporations provide an opportune source of revenue,¹⁹ even if the price for supporting such trade is capital extraction. In a word, it would appear that Third World states often have an interest in being complicit in the underdevelopment of their countries' economies. But if transnational corporations extract too much capital (for example, by means of practices such as transfer pricing), then Third World states would seem to have an interest in regulating the affairs of such companies or in threatening punitive measures.

Thus, otherwise incongruous economic facts suddenly become explicable when we take state interests seriously. Of course, many will object that Third World states are visibly at the mercy of global financial institutions, such as the International Monetary Fund and the World Bank. But as several commentators have acknowledged, the IMF and the World Bank appear to act 'as accessories to US policy'.²⁰ So, if one is to understand the policies of such financial institutions, it seems that one must look to the interests of the states that have the greatest say within them. We have seen that Shanin notes that states have been active in bringing new class structures into existence. This suggests that any adequate social and political theory would need to accord states far greater explanatory weight than is now common. We have also observed that states are often prepared to pay a considerable price to finance their military aspirations – to the point of incurring a huge debt. But why should this be so?

Consider one possible explanation for why states commit such a high proportion of their expenditure to armaments and for why they might choose, at times, to change their society's class structure: States are usually in military competition with some other state. Hence, they need to finance their 'defence' requirements. They also need the technological development upon which military development is premised. (For example, it is far easier to develop nuclear weapons if one has a 'civil' nuclear programme.) Thus, states have an interest in introducing and then stabilising those economic relations which are capable simultaneously of generating the maximum wealth the state can then tax and of developing the most sophisticated of technologies, for both ever-increasing revenue and ever-more advanced technology are needed for the state to remain militarily competitive.

But this can provide the grounding for a very different way of theorising historical developments from that presumed by either Marxists or neo-liberals. However, if we are to advance such a theory, we first need to be clear about a particular form of explanation – one that is easy to misconstrue.

We have reason to think that states sometimes choose to introduce and then stabilise economic relations that serve their interests. In short, states can be argued to support economic relations that are functional for them. But what kind of an explanation is this? It is a functional explanation. Functional explanations seem to rely on a certain kind of consequence law. And a consequence law takes the form:

(1) If (if Y at t_1 , then X at t_2), then Y at t_3 .

In (1), 'X' and 'Y' are types of events, and ' t_1 ' is some time not later than time t_2 , which itself is not later than time t_3 . In order to offer a satisfactory functional explanation, the cited consequence law would have to be of a particular kind: one in which Y is functional for X.²¹

Let us take as an instantiation of (1):

(2) If it is the case that if a species of predator were to develop better camouflage it would be able to hunt more effectively, then it would come to develop better camouflage.

Improved camouflage is functional for creeping up on prey. In order to explain why a tiger has stripes, we could cite (2). Thus, in explaining the development

III

of the tiger's colouring, we refer to the fact that its colouring is functional for its being able to approach its prey without being seen. We thereby provide a functional explanation.

But why do we think that such a functional explanation is cogent? Probably because of how we can elaborate it. In providing an appropriate elaboration, we could add a theory of genetics that, in explaining random mutations, tells us why some members of a species happen to be better camouflaged, while others are less so. We could further add a Darwinian claim about the survival of the fittest. Those predators with the best camouflage catch all the prey. Hence, the predators who tend to survive are the ones that have developed the best camouflage, which enables them to get closer to their prey than can other predators. Thus the species comes, over time, to develop improved camouflage, for only the members of the species who are better camouflaged survive long enough to have offspring. And some of their offspring will be even better camouflaged than their parents, and some will have less effective camouflage. Again, the ones that will tend to survive will be those with the best camouflage. Thus, because improved camouflage is functional for creeping up on prey, the species comes progressively to develop it.

We can now employ just such a form of explanation to account for epochal transitions, where a society has moved from less productive to more productive economic relations. Consider the following candidate for a consequence law:

(3) If it is the case that if societies were to acquire more productive economic relations they would be better able to develop their military capacity, then they would come to acquire such economic relations.

Such a consequence 'law' could be elaborated by employing a Darwinian-style claim about the survival of the militarily fittest societies. Some states might envisage that a new form of economic relations would increase productivity. If they choose to introduce and stabilise such economic relations, and if they do indeed turn out to be more productive, then they will be better able to survive in a world of militarily competing states. For the states that have chosen the most productive economic relations will be the ones with the greatest available surplus to spend on 'defence' requirements. And if other states do not follow suit by introducing the more productive form of economic relations, then they will be unable to keep pace with military developments and run the risk of being defeated militarily. And if they are defeated by a state that has chosen the most productive economic relations, then the conquering state is likely to impose those new relations upon its newly acquired territory.

On the other hand, if the state is wrong in believing that a specific new set of economic relations would be more productive, and if they turn out, in fact, to be less productive, then if the state fails to revert to its former economic structure, it will fail to fund the requisite advances in 'defensive' capacity. Consequently, it will fail to compete militarily. Thus, the states that survive will tend to be those that have selected what turn out in actual fact to be the most productive economic relations. And of those countries that do not, some may well be incorporated into larger territories and have more productive economic relations imposed upon them. Thus, it is not difficult to provide an elaboration for (3).

IV

But this opens up the possibility of a new way of theorising epochal transitions. Put in the briefest terms, states (political institutions) will tend to select those economic relations which best develop the productive forces (principally technology), for the development of the productive forces is functional for the further development of the state's military capacity. Given the key explanatory role played by the state in such a theory, an appropriate name for it is 'the State-Primacy Theory'.

To flesh out the theory in a little more detail, we might claim that those in control of a society's political relations (leading state actors)²² select for stabilisation those economic relations that best develop the society's productive forces (which are, of course, economic forces), for that is functional for the development of the society's political forces (which constitute its 'defensive' capacity). Those in control of the political relations seem to have an interest in so acting, for it is how they are able to retain power.

But those who are so located within the structure of economic relations that they are in direct control of the society's productive forces (the dominant economic class) clearly have an interest in supporting the state when it stabilises the economic relations which they, in particular, benefit from. In a word, individual members of the dominant economic class have an interest in supporting the state when it stabilises the economic relations that enable them to enrich themselves.

Moreover, those agents within the society's political forces (principally the military and the police) who operate its means of coercion (for example, its weaponry) would appear to have an interest in supporting those in control of the society's political relations in so far as the latter manage the extraction of wealth from the economy (usually through taxation). For it is precisely this extracted wealth which finances the political forces (in other words, which pays the wages of, for example, military personnel and which funds the development of their weaponry). And it is these political forces which can be employed to stabilise the economic relations which are selected because they are functional for the state. (The State-Primacy Theory is represented diagrammatically in Figure 1.)²³

However, it is important that a certain mistake not be committed which might lead to the theory being misconstrued. It might be presumed that because the State-Primacy Theory employs functional explanations, it must be a version of structural functionalism. But structural functionalism is primarily concerned with



FIGURE 1. The State-Primacy Theory

why things stay the same. In this respect, it is a conservative social theory. Its core claim is that a feature of society is the way it is because of its role in preserving that society *as it is*. The State-Primacy Theory, to the contrary, is a theory of revolutionary change. It claims that features of society are altered because they have become dysfunctional. It claims that societies are locked within a dynamic of competing states, and in order to remain competitive within that dynamic,

states must replace sub-optimal economic relations with optimal ones. A state will select *new* economic relations because doing so is functional for that state, given its need to survive within a system of competing states.

Furthermore, it should also be emphasised that the State-Primacy Theory is offered principally in order to explain the *outcome* of epochal transitions. It serves to account for the form taken by economic structures following a period of revolutionary change. Revolutions are highly significant events not only for the societies revolutionised but also for neighbouring states. A popular revolution within a country might give rise to a revolutionary zeal that spurred on its state to invade other territories, perhaps in order to effect similar structural changes within them. Neighbouring states are thus likely to fear invasion from any seemingly zealous revolutionary state. Any such perceived threat would probably lead to the increasing militarisation of threatened neighbouring states as well as of the revolutionary society. (One obvious example would seem to be the period of the Napoleonic Wars. Perhaps another is the period dominated by the rise of fascism.)

Alternatively, if neighbouring states did not fear invasion from a revolutionary state, they might still dread infection from its revolutionary ideals, which might spread contagiously through their territories. Hence, the threat a revolutionary society poses to the stability of neighbouring states might provoke one of them to assist an invasion, or to arm insurgents, or to invade it themselves (as happened to Cuba, Nicaragua, and Granada, respectively). It would thus appear that in order to deter any such threat, the revolutionary state would need to build up its military capability, and that would necessarily shape its choice of economic relations.

A third possibility is that the revolutionary society might be weakened because of internal conflicts which had come to prominence during the course of its revolution, thereby making it an attractive target for imperialist neighbours (as happened to Russia immediately after the 1917 Revolution). And resistance to aggressive intervention by neighbouring states would, surely, require the revolutionary state to expand its military capacity, which would force it to choose economic relations capable of supporting its military needs.

For these reasons, it can be argued that periods of revolutionary epochal change are most likely to lead to increasing militarisation. Most importantly, then, a revolution thus seems to require any revolutionary state to concentrate upon its military requirements and to stabilise whichever economic relations are appropriate for supporting its military needs. In other words, it is during revolutionary periods that the State-Primacy Theory is most likely to apply. But, surely, such periods are precisely those which shape the economic and political structure of the ensuing epoch. Consequently, the State-Primacy Theory is likely to be the most appropriate theory to employ when seeking to understand precisely those periods which it most needs to explain: namely, those periods that determine the shape of the ensuing epoch.

So, if we want to understand why certain economic relations have come to prevail, the State-Primacy Theory seems to provide us with a compelling explanation. The economic relations that will tend to prevail in an epoch are those which, at that time, are functional for states in so far as they enable them to retain their military competitiveness.

So, now consider how the State-Primacy Theory might be thought to be instantiated in the modern world. Centralised, pseudo-representative, quasidemocratic political structures choose for stabilisation highly competitive, inegalitarian economic relations, which develop non-convivial, environmentally damaging technologies. Such technologies are the precondition for, and produce the wealth required by, the maintenance and further development of nationalistic and militaristic coercive forces. And it is these coercive forces which both empower the state and ultimately stabilise the economic relations selected. (This is represented diagrammatically in Figure 2.)



FIGURE 2. An Environmentally-Hazardous Dynamic

316

V

In other words, given the prevailing international structure of competing states, the development of environmentally damaging technologies would appear to be functional for each state. Moreover, a state's very survival seems to depend upon it stabilising those economic relations which are most capable of increasing its productive capacity. And that means that it is likely to feel driven to stabilise economic relations which will develop the most productive of technologies. But such technologies are likely to be the most energy consumptive. They are also likely to be the most consumptive of other resources, too. And in being both energy- and (other) resource-consumptive, they are very likely to be highly polluting. In a word, there is reason to think that states are entrapped within an environmentally hazardous dynamic. There is reason to think that they are driven to stabilise economic relations which promote, indeed compel, environmentally destructive behaviour because that seems to be the price of their survival in a world where other states may well invade or otherwise compromise their territories at any time. And even if no state in fact desired to invade its neighbours, the possibility that it might wish to do so, and thus the threat it inevitably poses to neighbouring states, could be argued to be sufficient to drive such a dynamic.

If states are indeed locked within such an environmentally hazardous dynamic, then it would certainly explain why the present generation is acting in a manner that seems to pose such a threat to future generations. But if we *are* in the grip of such a dynamic, then in order to prevent harm befalling future generations, it would appear that we are morally obliged to escape from it. The key question is: How might we best do so?

Clearly, at the very least, some feature of the dynamic would need to be transformed. The dynamic as described comprises four key elements: the political relations, the political forces, the economic forces, and the economic relations. Consider a change within the political relations. It might be thought that all that would be required in order to escape from an environmentally hazardous dynamic would be a change of government - from one which is prepared to stabilise an environmentally destructive economy to one which isn't. Indeed, many of those who consider themselves green political theorists seem to think that governmental change would be adequate for dealing with any environmental crisis. But if a government, in order to reduce significantly its society's environmental impact, chose no longer to stabilise the most productive of economies, it would be threatening the budget of its political forces. Indeed, it would be so threatening the interests of its military that it would risk facing a military coup.²⁴ But a military coup would most likely put an end to all such environmental policies. Furthermore, the heightened role of any state's military would surely present an increased threat to neighbouring states. And the most likely outcome would be a perceived need on their part to increase their military expenditure, thus leading to an acceleration of the environmentally hazardous dynamic. To be certain of avoiding any such eventuality, it would seem that even a genuinely

environmentally-aware government would need to placate its military. But that would involve its remaining firmly within the dynamic. In short, merely changing the government would appear to be a singularly ineffective strategy.

But if the political forces appear to pose such a threat, consider, instead, a change within them. Imagine that they were to deploy themselves in the service of environmentalism. Such a wish seems more than a little fanciful, but there is a strain of authoritarianism within certain environmentalists.²⁵ And in so far as they want the present social order to coerce individuals into living more ecologically benign lives, one must assume that the society's political forces are supposedly to be deployed to that end. But any such emphasis on the society's coercive mechanisms for major social transformation is, just as with a military coup, likely to appear very threatening indeed to neighbouring states. And their likely response is to build up their coercive capacity. In other words, any such strategy also seems more likely to accelerate an environmentally hazardous dynamic than to dissolve it.

So, consider a change to the economic forces. Imagine that the society were to seek to adopt less environmentally damaging technologies. But given the present inegalitarian economic relations, it would seem that those who currently control most of the wealth would be precisely the ones who would lose the most from the introduction of less productive technologies on a sufficiently large scale. Moreover, given the competitive nature of present economic relations, were a member of that class which currently controls most of the wealth to introduce such technologies, he or she would most likely face a severe drop in profitability, and be driven out of the market place. How many would then choose to follow suit? Moreover, it would seem that the state would not provide the surplus required to satisfy its military needs. In a word, it is highly doubtful that less productive technologies would serve the state's interests. Thus, any faith in benign, widespread and adequate technological change arising on its own seems to be little more than blind faith.

Well, then, consider a transformation of the economic relations. Imagine that they were to become less competitive and more egalitarian. People would no longer be driven to introduce and employ the most productive technologies on pain of market failure. They could employ less energy-consumptive technologies and more labour-intensive ones. They would not be compelled to consume so many resources nor, correlatively, to emit so much pollution, for they would not be compelled to expand their markets or face bankruptcy. They could all choose to work less hard, and enjoy more leisure. Surely this would greatly reduce environmental impact. For, amongst other things, the people could grow many of their own organic vegetables in their free time rather than poison the topsoil on agribusiness farms geared to the maximisation of output per energy input. But then they would no longer be presenting to the state the wealth it presently taxes. And this would seem to be highly dysfunctional for the state. For it would be inconsistent with its interests in maximising the taxable surplus necessary for funding its perceived military requirements. Consequently, it can be argued that such non-competitive, egalitarian economic relations could not be expected to last long. The State-Primacy Theory would lead us to expect that the state would select and then stabilise new, more productive, economic relations – ones that would thus no longer be environmentally benign.²⁶

Why, therefore, does each of the proposed strategies appear to fail? The answer lies in the interrelational nature of the environmentally hazardous dynamic. The dynamic appears to be mutually reinforcing – so much so that a mere tampering with any one element *in isolation* seems destined to remain ineffective, for the other elements of the dynamic would simply bring it back into conformity with their general requirements. In a word, the dynamic seems to be self-sustaining, at least to the point of ecological collapse!

Of course, all of this seems to invite the rejoinder that what must therefore be required is a world government. For if an environmentally hazardous dynamic is being driven by militarily competing states, then some form of world state would surely put an end to it. But this seems to be the least plausible strategy of all. Just recall how many of the major human, large-scale catastrophes (with their deleterious environmental consequences) which have occurred since the Second World War (such as Bangladesh, Biafra, Ethiopia, the Balkans) have been wars of secession. Such conflict would surely increase were a centralised, global super-state created. We have seen the consequences of colonial powers arbitrarily drawing lines on maps of Africa and subjecting different peoples to the same government. The post-colonial legacy in numerous countries has been that of one ethnic group finding itself subject to rule by another - irrespective of whether or not the society became a majoritarian, representative democracy. And the outcome has often been savage ethnic conflict. The consequences of global government could easily turn out to be Rwanda or former Yugoslavia on a massive scale. And either wars of secession or the need to quell ethnic conflict could be argued to provide an internal drive for a global environmentally hazardous dynamic.

Interestingly, John Rawls would seem to agree, for as he writes: 'a world government – by which I mean a unified political regime with the powers normally exercised by central governments – would be either a global despotism or else a fragile empire torn by frequent civil strife as various regions and peoples try to gain political autonomy.'²⁷

VI

If all this is so, and if our very survival as a species depends upon stopping such a dynamic, what is to be done?

Perhaps rather than viewing the tampering with any one element in isolation as sufficient to inhibit the environmentally hazardous dynamic, a possible answer might be to view the transformation of each of its elements as a necessary condition for its inhibition. Moreover, transforming all four elements together might then prove sufficient. For it is the absence of the other conditions being met that seems to render insufficient the transformation of any single element. And this is because of the interrelational, mutually-reinforcing nature of the dynamic. In other words, it would not do to provide some contrary to a pseudo-representative, quasi-democracy or to competitive, inegalitarian economic relations or to environmentally damaging technologies or to nationalistic and militaristic forces without also providing contraries to the other elements of the dynamic.

What might such a set of contraries comprise? A decentralised, participatory democracy provides a plausible contrary to the first element of the environmentally hazardous dynamic (a pseudo-representative, quasi-democracy). More self-sufficient, egalitarian economic relations provide a plausible contrary to the second element (competitive, inegalitarian economic relations). Soft, convivial technologies²⁸ provide a plausible contrary to the third (environmentally damaging technologies). And a population prepared and able to employ pacifist methods in their own defence (and in defence of the environmentally hazardous dynamic (nationalistic and militaristic forces).

Moreover, a decentralised, participatory democracy would not be driven to reject self-sufficient, egalitarian economic relations (for, unlike present political systems, it would not need to retain centralised power, nor its prerequisites). Self-sufficient, egalitarian economic relations would not need to abandon soft, convivial technologies (for they would not impose the market pressure characteristic of present economies). Soft, convivial technologies are adequate to support a population prepared and able to employ pacifist methods in their own defence (and in defence of the environment). For example, pacifists do not need nuclear weapons, nor do they need the technology that is their precondition, nor do they need the economic relations that create the wealth required to develop them. And a population prepared and able to employ pacifist methods are quite capable of organising themselves in a decentralised, participatory and democratic manner.

Were such a set of alternatives to the elements comprising the environmentally hazardous dynamic to be actualised, it could offer those living within such a society the luxury of being able to exist in an environmentally benign way. And whereas it can be argued that an environmentally hazardous dynamic is *driving* us towards collective suicide irrespective of our wishes, the set of alternatives – let us call it an environmentally benign interrelationship – would seem to allow us to live in harmony with the rest of the biosphere upon which we depend.

However, a word of caution is in order. This is not to say that *only* a sudden revolution to an environmentally benign interrelationship would provide *any*

improvement. For example, a transition could be gradual so long as all elements of the environmentally hazardous dynamic were transformed in tandem. Additionally, the environmentally hazardous dynamic and the environmentally benign interrelationship constitute 'ideal types'. Hence, actually existing societies could be viewed as falling between them: some being more environmentally hazardous, some being more benign. And it is notable that those societies which appear to be relatively less hazardous (for example, Denmark) not only have more soft technologies, they also tend to have more political participation, to be less militaristic, and to be more egalitarian. What seems to be needed, generally, then, is a move considerably further from the hazardous and much more towards the benign.

Unfortunately, if the State-Primacy Theory correctly explains prevailing social and political interrelationships, then the state would surely resist any attempt to oppose the environmentally hazardous dynamic on all fronts, because that dynamic is, according to the theory, intimately related to the serving of state interests. How, then, could such a dynamic be effectively inhibited?

An answer might be possible if it turned out that, as a matter of fact, the coercive forces are insufficient to preserve state power on their own, and if the state is partly empowered by the compliance of its people. As we have seen, it appears rational for the state to back economic relations which develop the productive forces that provide the surplus it requires. And it appears rational for members of the dominant economic class to support the state insofar as it stabilises the economic relations they benefit from. Moreover, it also appears rational for subordinate economic classes to back the state in defending their nation from being subjugated by another, for such subjugation would probably lead to an even greater burden being imposed upon them. However, if such support for the state results in an environmentally hazardous dynamic posing an even greater threat than that posed by imperialist aggressors (whether real or imagined), then it is no longer rational for individuals to continue backing the state. And as the World Commission on Environment and Development despairingly reported to the United Nations:

The deepening and widening environmental crisis presents a threat to national security – and even survival – that may be greater than well-armed, ill-disposed neighbours and unfriendly alliances.... The recent destruction of much of Africa's dryland agricultural production was more severe than if an invading army had pursued a scorched-earth policy. Yet most of the affected governments still spend far more to protect their people from invading armies than from the invading desert.²⁹

But if this is indeed the situation, then were this widely known, then it would be highly irrational for the mass of the world's population to go on accepting it. For, as Jonathon Porritt writes:

Everything that once served to enhance both individual and collective security now serves to undermine it: larger defence budget, more sophisticated weaponry, the maximisation of production and consumption, higher productivity, increased GNP, the industrialisation of the Third World, expanded world trade, the comprehensive exploitation of the Earth's resources, an emphasis on individualism, the triumph of materialism, the sovereignty of the nation-state, uncontrolled technological development – these were once the hallmarks of success, the guarantors of security. Collectively they now threaten our very survival.³⁰

Hence, if the state is empowered not only by its coercive forces but also to a large degree by the compliance of its people, then an increasing perception that it is irrational to maintain that support could provide an answer to the environmentally hazardous dynamic. In other words, widespread individual non-cooperation with the state, undertaken as a response to the growing need to take action against the increasingly threatening environmental crises the state seems to be centrally implicated in, could conceivably disempower it.

In short, the extent of the environmental problems that we appear to face could provide the rationale and motivation for the disempowering of the state through non-cooperation. And this could begin to undermine any environmentally hazardous dynamic we might currently be imprisoned within. In which case, the disempowerment of the state by non-violent civil disobedience, and the correlative empowerment of those practising it, seems the most promising place to start undermining the environmentally hazardous dynamic. And 'the velvet revolutions' of Eastern Europe certainly suggest that widespread non-cooperation with the state can be an effective strategy for radical transformation.³¹

Now, while the changes in Eastern Europe might be thought to show that states are capable of more radical transformation than the State-Primacy Theory implies, to the extent that the changes were brought about through the undermining of state power by a disaffected citizenry, they might be viewed, instead, as offering evidence for the possibility of a move towards a more benign interrelationship. And this means that the State-Primacy Theory might only hold so long as the legitimacy of the state is not widely questioned. Unfortunately, given the extent to which the peoples of Eastern Europe look towards Western political and economic models, then unless they soon recognise the probable environmental costs of adopting them, the future looks bleak. Clearly, what is appealing to many in Eastern Europe is the level of affluence enjoyed in the West – precisely the feature of western societies which environmentalists regard as a major cause of environmental crises.

This raises an important issue. States can, perhaps, remain in power not just by the threat of force but also by appearing to be able to offer the material goods demanded by their populace. Materialism could, conceivably, seduce a whole population to such an extent that a need for change was deflected or prevented from even being perceived. This possibility means, as was noted earlier, that there might be an internal drive to the environmentally hazardous dynamic – an impetus that does not require the presence of any external military threat. For example, it could be argued that if materialist values prevail, then in order to retain power, states would have to sustain the material productivity necessary to keep their peoples seduced, and thus introduce or preserve those economic relations most conducive to sustaining it. And to the extent that this was successful, states would have an interest in maintaining materialist values.³² What our duty to prevent others from risking drowning future children in a sea of pollution would then require of us would be a systematic attack on those values, as well as on the perceived legitimacy of the state.

VII

In conclusion, there are grounds for fearing that we are being driven to harm future people. But would the fact of being driven not attenuate our individual responsibilities? Not if we are being driven to harm future people because we choose to cooperate with a system that is so driving us. To be precise, if such a system only persists in its present form because so many people choose to cooperate with it and thereby empower it, then we would each remain responsible by choosing to continue cooperating with such a system. And even if others are being driven against their wills to harm future people, that would not allow us to evade our responsibility to try to stop them so acting. For if an adult were being compelled against his or her will to throw children into a pond in which they might drown (or into a gas chamber in which they might be poisoned), we would still, at least *pro tanto*, be morally obliged to try to prevent that person from threatening the lives of innocent children.

The key implication of all this is that certain common political responses to environmental destruction are likely to prove inadequate. Admittedly, considerations of space have only permitted the most cursory treatment of these numerous and complex issues.³³ But I suspect that enough has been said at least to raise the suspicion that any moral obligation we might have to prevent harm befalling future generations may well *demand* of each of us unwavering commitment to a political practice far more radical than most modern political theory has dared to imagine.

NOTES

¹This question was, of course, famously posed by Peter Singer (1972).

²On how not providing aid can reveal one to be a moral monster, see Rachels 1982.

³For just a small sample, see McLaren et al. 1998, Brown et al. 1996, Jacobs 1996, Odum 1989, Seymour and Girardet 1988, Brundtland et al. 1987, Bunyard and Morgan-Grenville 1987 and Myers 1985.

⁴And from a moral point of view, just as, *ceteris paribus*, it appears arbitrary where a person harmed by one's actions is geographically located, so, too, does it appear arbitrary when she is temporally located.

⁵See Schwartz 1979 and 1978. This argument is also discussed, and not satisfactorily rebutted, by Derek Parfit (1987, Part IV).

⁶This, of course, would be to presuppose that the harm it would cause future persons is the only reason for not damaging the environment.

⁷See Carter 2001 and 2002a.

⁸Lawrence E. Johnson (2003, p. 474) considers it a 'virtual certainty' that each of us would 'affect the make-up of an entire generation' even within 'a year or two' because of 'the butterfly effect'. But he provides no evidence at all for such an extravagant claim. (Indeed, it is difficult to see what could count as evidence for it.) Rather, his rebuttal appears to be based upon nothing more than a mere assertion of his faith in a highly contentious assumption. Moreover, if we are not to risk any harm to future persons, then it would have to be a genuine certainty, and not merely a 'virtual' one. Johnson also sees my view on future generations as 'a last-ditch attempt' to save the person-affecting principle. See ibid. This is erroneous. My approach to moral problems posed by the question of future persons is a value-pluralist one, which can combine total and average utilitarian theories, hence simultaneously avoiding both the Repugnant Conclusion and the problems facing the average view (and these are precisely the problems that seemed to demand the person-affecting principle). See Carter 1999a; and for a more developed version of the value-pluralist approach I advocate, see Carter 2002b. For an indication of how this approach can ground a richer environmental ethic than has been developed to date, see Alan Carter, 'Inegalitarian biocentric consequentialism, the minimax implication, and multidimensional value theory: A brief proposal for a new direction in environmental ethics,' forthcoming in Utilitas. The above response notwithstanding, for those, unlike myself, who are nevertheless persuaded by Johnson's argument, our obligation to consider the 'wellbeing interests' (see Johnson 2003, p. 486) of humanity (construed collectively) could be used instead to ground the argument that follows.

⁹Note: it is possible for a single person to determine the existence of certain future people and yet still harm them. All that is required is that one of his or her actions determines their existence, while a second proceeds to make them worse off than they would otherwise have been. Thus, even if one person were able to determine the existence of every future person, he or she could still manage to harm them. See Carter 2001.

¹⁰O'Riordan 1981, p. 386.

¹¹See George 1990, p. 22.

¹²Ibid., p. 23,

¹³See ibid., p. 12.

¹⁴See ibid., p. 27.

¹⁵Warren 1973.

¹⁶Krasner 1985, p. 181.

17Shanin 1982, p. 316.

¹⁸On the underdevelopment of the poorer regions of the globe, see Frank 1967 and 1989, and Wallerstein 1974.

¹⁹See Todaro 1985, p. 414.

²⁰Robert Cox, quoted in Panitch 1994, p. 69.

²¹For the seminal account of functional explanation to which I am here indebted, see Cohen 1978.

²²This is a considerable over-simplification. The interests of different state actors do not all 'push' in the same direction, and different state actors have different abilities to move the state in the direction most in their own interests. Yet all will make some contribution to the outcome, and not merely 'leading' state actors. We might more appropriately think of state interests as like a vector: a 'parallelogram of forces', as it were.

²³In Figure 1, X_1 selects Y_1 because Y_1 is functional for X_1 , and X_2 selects Y_2 because Y_2 is functional for X_2 .

²⁴It is perhaps worth recalling that, in the twentieth century, only a tiny minority of European countries avoided living under a dictatorship at one time or another. And with regard to one of those few exceptions, it is perhaps also worth recalling that '[i]n the mid-seventies, there was informed speculation as to the prospects for a military coup in Britain: the country was seen as harder to govern; the unions were "too" powerful; a variety of new movements made for unrest on the streets; and the politicians were regarded as failing to get a grip. Men in the shadows regarded authoritarian rule with favour, and, for many, democracy went out of fashion. In fact, practice has shown that it would not take a coup to bring British troops onto the streets and into a position of political prominence. Moreover, we should remind ourselves that no revolution in Britain would be left wing, for the army are the men with the guns, and, like many other parts of the secret state, they are committed to the essentials of the status quo - and to the status quo as once was at that.' Dearlove and Saunders 1984, p. 162. If a previous Labour Government could easily have invited a military coup, it seems far more likely that a genuinely green one would do so, for its policies would be far more threatening to military interests.

²⁵See, for example, Heilbroner 1975, especially p. 39, and Ophuls 1977.

²⁶Interestingly, the Bolshevik state felt compelled to replace the factory committees which arose in the 1917 Russian Revolution with far less egalitarian 'one-man management' precisely because the former did not seem to offer the surplus the revolutionary state believed it needed in order to support its perceived military requirements. As Lenin remarked in 1918: 'In every socialist revolution...there necessarily comes to the fore-front the fundamental task of creating a social system superior to capitalism, namely, raising the productivity of labour, and in this connection (and for this purpose) securing better organization of labour.' Lenin 1970, p. 22. And why was this so essential? In Lenin's view, because '[a]ll our efforts must be exerted to the utmost to...bring about an economic revival, without which a real increase in our country's Defence potential is inconceivable.' Ibid., p. 6. Ironically, Lenin's actions seem to fit the State-Primacy Theory far better than they fit any Marxist theory.

²⁷Rawls 1993, pp. 54–5.

²⁸The distinction between 'hard' and 'soft' technologies derives from the work of Amory Lovins: 'There exists today a body of energy technologies that have certain specific features in common and that offer great technical, economic, and political attractions, yet for which there is no generic term. For lack of a more satisfactory term, I shall call

them "soft" technologies: a textual description, intended to mean not vague, mushy, speculative, or ephemeral, but rather flexible, resilient, sustainable, and benign.' Lovins 1979, p. 38. The term 'convivial' derives from the work of Ivan Illich: 'a society, in which modern technologies serve politically interrelated individuals rather than managers, I will call "convivial".... I have chosen "convivial" as a technical term to designate a modern society of responsibly limited tools.' Illich 1975, p. 12.

²⁹Brundtland et al. 1987, p. 7.

³⁰Porritt 1984, p. 217.

³¹Interestingly, Michael Waller and Frances Millard do not find it in the least surprising that 'the environmental degradation of Eastern Europe fuelled the movements of dissent that were the harbinger of change in the region.' Waller and Millard 1992, 182.

³²Nevertheless, such materialism could be challenged by demonstrating that its environmental costs make it counter-productive to pursue it – a task made easier the more those costs become apparent. This is one possible explanation for the rise of post-materialist values, whereas the standard explanation sees post-materialism as arising once affluence has been enjoyed. See Inglehart 1981; also see Elgin 1981. If either explanation is correct, then values that would undermine an environmentally hazardous dynamic might be expected to spread and deepen as the dynamic progressed. While ideological inertia makes change more difficult, the costs of materialism seem to be becoming ever-more apparent, dissatisfaction with materialism emerged in the latter half of the twentieth century, and the subsequent growth of post-materialist values could provide a new motive for radical transformation.

³³For a less cursory treatment, see Carter 1999b.

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