

Corporate Environmental Responsibility

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ABSTRACT. This paper offers directions for the continuing dialogue between business ethicists and environmental philosophers. I argue that a theory of corporate social responsibility must be consistent with, if not derived from, a model of sustainable economics rather than the prevailing neoclassical model of market economics. I use environmental examples to critique both classical and neoclassical models of corporate social responsibility and sketch the alternative model of sustainable development. After describing some implications of this model at the level of individual firms and industries, I offer an ethical justification of the sustainability alternative that is derived from the same values that underlie traditional market economics.

This paper offers directions for the continuing dialogue between business ethicists and environmental philosophers. I hope to focus that conversation onto a topic that is critical to each field: corporate social responsibility in the age of sustainable economics. While a longer-range challenge is to work out the specific ethical implications that a shift to sustainable economics would have for individual firms and industries, this paper is more programmatic. Here, I seek only to lay the conceptual groundwork for such a project and suggest directions for future work.

An adequate account of corporate environmental responsibility should do two things: it

should address the entire range of environmental and ecological issues affected by business decisions in a way that might actually turn the tide of environmental and ecological deterioration; and it should be capable of influencing business policy. It seems to me that much of the work done by business ethicists to date fails the first criterion; much work done by environmental ethicists fails on the second.

A brief consideration of the present economic, population and ecological realities suggests the importance of integrating these fields. Consider three relevant facts. First, a significant percentage of the world's population live at or below a minimal level of subsistence. One quarter of the world's population live in industrialized countries and they consume 80 percent of the world's goods. To meet just the simple needs and minimum demands of the other 75 percent of the world's population, significant economic activity is necessary over the next few decades. One estimate holds that a fivefold increase in energy use and a five-to-tenfold increase in economic activity would be required over the next 50 years to bring the standards of living for the present population of developing countries into line with that of people in the industrialized world.¹

Second, even conservative estimates suggest that during these fifty years world population will double, bringing the total world population to over eleven billion people.² Thus, economic activity needs to increase minimally by ten-to-twentyfold to bring the standard of living of the actual world population in fifty years into line with that enjoyed by people in the industrialized present.³

Finally, we must recognize that the only source

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for this economic activity, ultimately, are the natural resources of the planet. The three standard factors of production – natural resources, capital, and labor – all derive from the productive capacity of the earth. In simple terms, raw material, energy, and food are the essential elements of all economic activity. Yet, the productive capacity of the earth is already under significant stress. For example, one estimate suggests that if the world's population in forty years consumed nonrenewable mineral and petroleum resources at current U.S. rates, these resources would last fewer than 10 years.⁴

These three factors – deep world-wide poverty, increasing population growth, and limited resources within an already threatened ecosphere – raise a serious economic and moral dilemma. Significant economic activity will be necessary to meet the basic needs of an increasing human population, yet economic growth itself is responsible for much of the environmental degradation which already jeopardizes the possibility of meeting even present needs. It would seem that continued economic growth alone will not resolve this dilemma.

Nevertheless, much of the work being done by business ethicists continues to operate within the paradigm of neo-classical economics. For the most part, corporate social responsibility is derived from the role that business plays within a demand-driven economic system. Most mainstream views on corporate social responsibility hold that responsible business activity flows from the nature of the economic system in which business operates. On this view, firms and industries are society's tools for attaining the ethical goals of a market-driven economy; namely, the satisfaction of those social demands that get expressed in the market.

Since economic growth is an assumed good within this economic system, standard views of corporate social responsibility implicitly presuppose the moral legitimacy of economic growth. For example, the classical model of corporate social responsibility argues that economic efficiency and obedience to the law is sufficient for satisfying moral responsibility. Neoclassical models argue that once minimal moral constraints are met, economic efficiency should

remain the primary measure of the social responsibility of business.

In contrast, if any consensus has emerged among environmental philosophers, it is that unrestrained markets and economic growth are ecologically and ethically deficient. Economic sustainability, in which a qualitative understanding of “*development*” replaces the more quantitative conception of “*growth*,” provides a more acceptable economic vision according to many environmental philosophers. Economic growth, and the unrestricted consumer demand that drives it, is, on this view, a primary cause of environmental and ecological deterioration. At present, it seems incapable of meeting the basic needs of billions of people and, given continued population growth, continued reliance on economic growth to solve social problems is surely unwise. Thus, to the degree that mainstream views on corporate social responsibility assume the ethical legitimacy of economic growth, they rest on a serious environmental, and ethical, mistake.

In this paper I argue that a theory of corporate social responsibility must be consistent with, if not derived from, a model of sustainable economics rather than the prevailing neoclassical model. I use environmental examples to critique both classical and neoclassical models of corporate social responsibility. Next, I sketch the alternative model of sustainable development and its implications at the level of the firm and individual industries. Finally, I suggest how a justification for this alternative can be derived from the same values that underlie growth-based market economics.

The critique of classical model

The classical model of corporate social responsibility is succinctly captured in this short quotation from Milton Friedman, perhaps its best known defender:

there is one and only one social responsibility of business – to use its resources and engage in activities to increase its profits so long as it stays within the rules of the game, which is to say, engages in

open and free competition, without deception or fraud.⁵

The rationale for this view clearly follows from the role of corporations within a free market economic system. Corporations are organized to provide the most efficient means for producing goods and services and thus for satisfying consumer demand. In an open and competitive market, the prices of goods and services are established by the willingness of consumers to pay for them. Willingness to pay, in turn, is a measure of how much value a consumer places on the particular product. Thus, in general, an increase in profits is evidence that goods and services are going to those people who most value them. Profits, therefore, are the measure of how efficiently a manager is using resources to meet consumer demand; increased profit reflects the most efficient use of resources in satisfying consumer demand. Indeed, the justification of managerial authority lies in the fact that managers have the experience, knowledge, and skills to arrange resources to most efficiently meet consumer demand.

The classical model of social responsibility denies that business has any direct environmental responsibility. The classical model sees business as cooperating with society in attaining the environmental goals freely chosen by consumers in the marketplace. Business serves these environmental goals not by taking on any special environmental responsibility, but by fulfilling its function within a free market economic system.

Philosophical challenges to the classical model are well-known and a full review is unnecessary here. We need mention only three that are particularly relevant for environmental concerns.

First, a variety of *market failures* demonstrate that markets offer no guarantees of successfully meeting society's demands. Externalities such as pollution and resource depletion, and goods for which no pricing mechanism exists, such as the survival of an endangered species or the scenic beauty or historical significance of a landscape, provide examples where market failure leads to environmental destruction.

A second challenge points out that business interests on the "micro" level of individual firms

and industries are not always identical to the "macro" level goals of the market. One way in which a corporate manager can maximize profits is to lobby government to protect the particular firm or the particular industry from market forces. The savings and loan bailout, import tariffs, farm price supports, and countless other examples of government subsidies demonstrate the divergence of business and market interests. On-going debates over below-market sales for grazing and timber rights on public lands throughout the American West are perhaps more environmentally relevant examples. In all of these examples the business goal of profit maximization (or, more to the point, survival) is incompatible with the market goal of optimal satisfaction of consumer preferences.

The upshot of this is that there are no guarantees that the interests of individual businesses or of particular industries will overlap with the good of society. The environmental implications of this should be apparent. Even *assuming* that society's interests are captured by the market, it is too risky to assume that these interests will always be served by the unrestricted self-interested decisions of corporate managers. This assumption is particularly risky when irreversible environmental decisions are made, as when, for example, habitat is destroyed, wilderness developed, species extinguished, or nonrenewable resources used. Further, this risk seems even more dangerous when we recognize the immense influence that business has in shaping the political agenda.⁶

A final challenge raises a more general and familiar problem with the ethical goal of free market economics. Ultimately, the classical model takes as its most fundamental ethical goal the maximum satisfaction of those individual preferences that get expressed in markets. The "good of society" that Friedman identifies as the goal of Smith's invisible hand is simply the satisfaction of consumer preferences. But given that human preferences can include those that are both silly and immoral, we cannot assume that the maximum satisfaction of preferences is an ethical goal. As Mark Sagoff has convincingly argued, there is no reasonable, non-question begging answer to this question.⁷ We have little reason

to assume that there is a moral content to the particular preferences expressed in the market. Depending on what people in fact prefer, maximally satisfying preferences could turn out to produce vacuous, trivial, immoral, or unjust results.

The environmental implications of this challenge are enormous. For the entire range of issues in which economic growth competes with environmental or ecological ends, the classical model necessarily locates corporate responsibility on the side of economic growth. In this respect, economic growth is simply another phrase for increased satisfaction of consumer preferences. Whatever one thinks about any particular issue that clashes with economic growth – issues ranging from wilderness protection to conserving biodiversity, from global warming to the moral status of animals, and from energy conservation to pollution control – it is dangerous to assume that satisfying consumer preferences is in principle the morally justified goal or that it will produce environmentally benign outcomes.

The neo-classical model

While the problems with the classical model are well-known, it remains firmly embedded in contemporary culture. In response to many of these problems, revised versions of the classical model now dominate discussions of corporate social responsibility within the field of business ethics. According to Norman Bowie, “something of a consensus has emerged in the past ten years regarding the social responsibility of business.” Bowie refers to this “neoclassical” model of corporate social responsibility as holding that corporations ought to seek profits while nevertheless obeying a “moral minimum.”⁸

This moral minimum is interpreted in different ways by different versions of the neoclassical model. Bowie favors “avoiding harm” as the moral minimum. Others might argue that business has the obligation to fulfill its social contract with society, or that business has ethical responsibilities to a variety of stakeholders, or that business ought to respect the moral rights of employees and consumers.⁹ With this focus on

a “moral minimum,” the neoclassical model seeks to overcome the obvious ethical deficiencies of the classical view.

Bowie’s views are representative of the neo-classical revisions of the classical model. His views on business’ environmental responsibilities, for example, offers answers to the three challenges mentioned above. Bowie suggests that government regulation has a legitimate role in correcting market failure. Thus, the law steps in to impose obligations on business where markets fail. To counter the possibility that business might use its political influence to set the environmental agenda, Bowie argues that business has a special obligation “to avoid intervention in the political process for the purpose of defeating or weakening environmental legislation.”

Most importantly, to insure that the workings of the market will have moral content, Bowie interprets the moral minimum as including protection of individual health, safety, and basic freedom.¹⁰ The point of establishing a moral minimum is to exempt some goods from the utilitarian trade-offs that typify markets. Some things are so valuable that we morally ought not to sacrifice them even if doing so would result in a net increase in overall satisfaction.

This neoclassical approach has the decided advantage over the classical model of providing a genuine moral limit on the pursuit of profit. A moral minimum is incorporated into the “rules of the game” and becomes part of standard business practice. Of course, this minimum establishes constraints upon managerial practice. Managers are not free to do just anything in their pursuit of profit. But, economists have long recognized that all markets operate within constraints, the physical limits imposed by natural, scientific laws being the most obvious. The classical model of corporate social responsibility incorporates further legal constraints, as well as prohibitions against fraud and coercion, as part of these limits. The neo-classical model simply expands this to include moral constraints as well. Thus, the mark of a skilled manager is optimizing profits within the constraints established by the rules of the game.

From an environmental perspective the neo-classical model seems capable of offering signif-

icant protection of the natural environment. Environmental concerns need only be integrated within the moral minimum to become part of business' social responsibility. The challenge is to develop an account of environmental responsibilities that is sensitive to a wide enough range of environmental and ecological concerns yet plausibly within a "moral minimum" that can still motivate business compliance.

However, on Bowie's own view no direct environmental responsibilities fall within the moral minimum. Bowie believes that there needs to be trade-offs between environmental harms and the utility of the goods and services produced by business. Further, he argues that finding this balance is best left to the "social consensus" that emerges through the competitive workings of the market.¹¹ But, this is to say that environmental concerns are outside the moral minimum since that minimum exists precisely to prohibit such trade-offs between moral and economic ends.

My biggest hesitation with this model lies with its continued reliance on consumer demand in setting environmental limits to business conduct. Economic growth, understood as continued satisfaction of whatever preferences get expressed in the market, remains an implicit value of the neoclassical model. However, we have strong evidence to suggest such unconstrained demand will not resolve the dilemma created by poverty, population growth, and environmental destruction. I wish to argue that significant environmental considerations, like other significant moral responsibilities, must be incorporated within the moral minimum and thus serve as a real moral limit on both business activities and consumer demand.

Neoclassical alternatives

The neoclassical model of corporate social responsibility nevertheless does hold great promise. Since it is developed out of standard market economics and thus assumes the legitimacy of the "profits-through-growth" paradigm, this model is attractive on practical grounds. It can generate significant social responsibilities for business without asking for heroic sacrifices. It

is plausible to think that environmental concerns can be incorporated into the moral minimum. A variety of strategies might be taken to meet these goals.

One strategy would be to argue that natural objects like animals and trees have moral standing. In this way, the well-known views of Peter Singer, Tom Regan, or Christopher Stone might be incorporated into the neoclassical model by restraining the pursuit of profit in the name of animal suffering, animal rights, or the rights of trees and other natural objects.

This seems to be the strategy taken by W. Michael Hoffman in a recent essay.¹² Like Bowie, Hoffman argues that the moral minimum should be understood in terms of the harm principle, but unlike Bowie he suggests that this principle should include harm to nonhumans. Hoffman supports a biocentric (or "life-centered") ethics in which all living beings have intrinsic value and therefore have moral standing. However, this version of biocentric ethics is problematic on both practical and environmental grounds.

There are serious practical difficulties for the strategy of incorporating a biocentric ethics (any ethics which extends moral standing on the basis of life) into the moral minimum. Taken literally, a deontological biocentric ethics would prohibit all forms of economic activity. "Do not harm living things" as a moral minimum would prohibit not only most forms of business activities, but most forms of human activity as well (what would we eat?). A consequentialist biocentric ethics ("minimize harm to all living beings") is more plausible, but still would require impossibly difficult calculations before acting.

Of course, biocentric ethics need not be of these extreme versions. Hoffman and other defenders of this approach suggest development of some criteria for rank-ordering the interests of living things.¹³ Nevertheless, working out such a hierarchy of interests (as would be required by either the deontological or consequentialist version) and using this hierarchy to restrain business activity strikes me as prohibitively impractical. Does the human interest in ski slopes outweigh the life interests of trees, or the unobstructed habitat interests of deer? Would it matter if developers were building an exclusive

housing development rather than a ski slope? Would it matter if they were building low-income housing? or a farm?¹⁴

More importantly, I suggest that this biocentric approach will fail both criteria introduced at the start of this paper. It will be unlikely to have significant influence on business policy, and it does not address a wide enough range of environmental issues.

Despite some success of laws such as the Endangered Species Act and those regulating the use and treatment of animals in research and food production, I think that the political realities are such that this strategy is not likely to provide more than a token limitation on economic growth. To influence business decisions effectively, the biocentric approach must assume that managers and policy makers will be motivated by appeals to the interests of such things as plants and animals. Frankly, I think this unlikely to happen. Rather, effective policy should appeal to the interests, albeit long-term, of human beings.

But even assuming that we could develop some practical biocentric guidelines for corporate social responsibility, it is not clear to me that a biocentric ethics will prove environmentally adequate. Three challenges suggest why a biocentric approach is ecologically incomplete.

First, a strict biocentric view will have difficulty identifying the beneficiary of some responsibilities. Let us use the well-known Exxon Valdez case and follow a biocentric suggestion that we grant legal standing to individual living things. Let us also assume that the rights of many living beings have been violated by the negligent operation of the oil tanker. To whom, therefore, would Exxon owe compensation for these harms? Since the living beings whose rights have been violated are dead, they are unable to benefit from any restoration program.

Of course, a plausible suggestion is that in such cases the species or *ecosystem* should be compensated in the form of restoration and replanting. That is, a more holistic or "ecocentric" ethics would identify both the harms and the beneficiaries in terms of systems rather than individuals. Unfortunately, a biocentric ethics would need a concept of life broader than ones typically

used in order to integrate species or ecosystems into its consideration.

A second challenge raises a similar point. There is no guarantee that preventing harm to individual organisms will provide ecological benefits. In fact, there are examples where protecting the interests of individual living organisms harms rather than protects the ecosystem. The familiar example concerns the over-population of deer which has disastrous consequences for many local habitats. The point is that individual organisms, including humans, are part of complex ecological communities. These communities involve an intricate balance of interdependencies. For many environmentalists, maintaining the equilibrium within natural ecosystems should be the primary goal of an environmentally sound ethics.¹⁵

The third challenge is that a biocentric approach can tend to neglect important environmental issues like resource depletion, ecosystem destruction, and wilderness preservation. At best, the biocentric approach views ecosystems as habitat in which morally considerable beings live. While I would not defend a total preservationist view, something more needs to be said about the value of ecosystems, habitat, and wilderness.

The point of these challenges is to suggest a different strategy for incorporating environmental concerns into the moral minimum. This strategy would argue that a more holistic and ecological perspective is environmentally preferable to the individualism implicit in the biocentric approach. On this view, the moral minimum would need to incorporate avoidance of harm to ecosystems, rather than merely to individual living organisms. This ecocentric approach can be tied to human self-interest since without a healthy ecosphere human well-being is threatened. It also provides a broader and more satisfactory environmentalism.

We can draw three general conclusions from what has been said so far. First, models of corporate social responsibility that rely on standard versions of market economics and economic growth will likely prove environmentally and economically inadequate in the near future (taking a cue from Dr. Suess, we might call this

the “Lorax Principle”). Second, theories of corporate social responsibility that diverge too much from market economics are unlikely to be convincing in the present context. To have any hope of directing corporate policy, ecological principles must be tied to the (long-term) self-interest of business. It has been all too easy for environmental positions to be dismissed as beyond the fringe. Finally, environmental responsibilities will be incomplete unless they include more holistic and ecocentric perspectives.

Corporate social responsibility and sustainable development

The alternative that I suggest holds that business has a moral responsibility to insure that its activities be ecologically sustainable. We can say that the household’s “nomos” must be brought into line with its “logos”. The “moral minimum” that constrains economic activity should include ecological sustainability. I argue that the sustainability alternative can provide ecologically sound and practical guidance. Business remains free to pursue profits within the rules of the game; but the rules must be changed to include the obligation to leave natural ecosystems no worse off in the process.

As mentioned earlier, all markets operate within constraints, the physical limits imposed by natural, scientific laws being the most obvious. The classical model of corporate social responsibility incorporates legal constraints while the neo-classical model includes moral constraints as part of these limits. The sustainable development model seeks to combine the natural constraints established by ecological laws with minimal moral constraints placed upon business activity.

In light of the poverty–population–environmental destruction dilemma, the rules of the game must be adjusted to insure that the economic system (and the firms and industries that operate within it), fulfills its social function. Since humanity still requires significant economic activity to provide for the basic needs of an increasing population, the rules must be changed to transform this activity from unrestricted *growth* to *development*.

It should be noted at the outset that “sustainability” and “sustainable development” are controversial ideas within ecological circles, being judged not “deep” enough by some environmentalists. Sustainable development presupposes, after all, the legitimacy of using natural objects and other living beings as *resources* for human ends. Thus, defenders of animal welfare/rights, as well as supporters of a preservationist ethic for wilderness areas and ecosystems, are suspicious of sustainable development. Deep Ecologists and Social Ecologists likewise would argue that sustainable development continues to concentrate too much power in the hands of too few corporations. Nevertheless, as a basis for corporate environmental responsibility, sustainable development offers the best hope for meeting the two criteria of adequacy mentioned at the start of this paper. Sustainability can be understood in such a way that it can address a wide enough range of environmental and ecological issues. It also could turn the tide of environmental deterioration in a way that has a reasonable chance of influencing business policy.

One simple statement of the concept of sustainability comes from the World Commission on Environment and Development. Sustainable development “meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹⁶ If we accept this as a moral principle limiting business practice, then business would have an obligation to avoid harming the ecosphere, understood as the interdependent community of living organisms and their non-living physical environment. Business activity would be considered as harming the ecosphere when it uses resources at unsustainable rates or creates wastes that cannot be absorbed by the ecosystem.

Economist Herman Daly is perhaps the best-know defender of sustainable economics. On Daly’s view, the distinction between “development” and “growth” is at the heart of sustainable economics.

To *grow* means “to increase naturally in size by the addition of material through assimilation or accretion.” To *develop* means “to expand or realize the potentialities of; to bring gradually to a fuller,

greater, or better state.” When something grows it gets bigger. When something develops it gets different. The earth ecosystem develops (evolves), but it does not grow. Its subsystem, the economy, must eventually stop growing, but can continue to develop. The term “sustainable development” therefore makes sense for the economy, but only if it is understood as “development without growth.”¹⁷

To develop this model further we need to answer several questions. What does it mean to say that some activity is ecologically sustainable? What would it mean to say that business has a responsibility to avoid harming the ecosphere? What reasons can be given to include this responsibility within the moral minimum?

If we consider the dilemma mentioned at the start of this paper, we can gain an insight into this sense of economic development. Significant economic activity will be necessary to meet the basic needs of an increasing world population over the next few decades. Yet, it would seem that this needs to be a type of economic activity unlike the growth that has characterized modern industrialism. On the other hand, in a world of eleven billion people, it is unrealistic to think that humans can return to some non-industrial, ecologically benign economy. Nor is it reasonable to move towards a command economy in which business and industry are directed to meet consumer needs before satisfying preferences.

The solution to this dilemma requires a robust economy of a qualitatively different type: an economy that strives to meet basic needs while constrained by ecological realities. In short, economic activity that “meets the needs of the present without compromising the ability of future generations to meet their own needs.” Following Daly, we can call such economic activity “development” to contrast it with the unrestricted activity of “growth.”

By connecting economics to ecology, the sustainability model is preferable to the biocentric alternatives described previously. Individual elements of an ecosystem (plants, animals, non-living natural objects) can continue to be used as economic resources; they do not have moral standing, or rights, as individuals. Moral consideration should be given to the system. individual

elements of an ecosystem can be used for human ends as long as the system itself remains stable and healthy.

Of course, “sustainability” is problematic when applied to ecosystems. All ecosystems change over time, including fairly radical changes over the long term. Individual ecosystems are created, develop, decline, die. Hence, change rather than stability would seem a more appropriate characteristic of ecosystems. But how does one sustain change and how does change provide ethical norms? What is needed is an account of ecosystem well-being that is well-grounded in scientific understanding and yet fertile enough to provide reasonably clear normative guidance. What is it that we are trying to “sustain” and why should we value it?

Developing a full account of ecological sustainability is beyond the scope of this paper. Nevertheless, I think we could defend some minimal conditions for ecosystem well-being, not the least of which is the ability to sustain diverse forms of life over time. Two important elements of sustainable development involve the scale and the rate of ecological change. Ecological change that is too rapid, too wide-spread, and too uncontrolled will jeopardize the ability of an ecosystem to sustain diverse life over time.

In general, the implication is that business may continue to seek profit by converting natural resources to meet the demands of the market. This model continues to appeal to rational self-interest as its motivating consideration. Significant economic activity is required in order for business to meet the needs of an increasing human population in an already ecologically-stressed world. Entrepreneurial opportunities abound. However, business has the obligation to use resources at appropriate rates and compensate ecosystems for the loss of productive capacity caused by its activity. A helpful image for understanding these responsibilities is to think of natural resources as capital. Our economic goal should be maximum sustainable yield in which we live off of the income generated by that capital without depleting the investment itself.

More specifically, as we move from level of economic models towards the level of responsibilities for specific firms and industries, we

should adopt three general normative principles. First, *renewable resources ought not to be used at rates that exceed the system's ability to replenish itself*. Agriculture and forestry are two industries that would have clear responsibilities in this respect. But any business that uses plant, animal, air and water resources (i.e., most businesses) must insure that these resources are being used at sustainable rates. Failure to do so would require reparation for these harms.

The well-known case of Pacific Lumber illustrates this principle. For over a century, Pacific Lumber was operated as a family-run business, managing its timber reserves on a policy of sustained yield. This policy provided a stable supply of timber and stable profits over the long-term. However, it proved not to be profitable enough.

In 1986, financed by \$900 million in Drexel Burnham Lambert junk bonds, corporate raider Charles Hurwitz took control of the company in a hostile takeover. To repay these debts, a more aggressive management style was required. The rate of timber harvest was increased, clear-cutting techniques used, replanting projects abandoned, and old-growth forests were opened to harvest. The long-term results were tragic both ecologically and economically.

Ecologically, thousand-year-old trees were cut for the short-term profits of present shareholders. Clear-cutting this timber caused significant erosion and pollution. Habitat for many species, including the infamous spotted owl, was destroyed. While present shareholders reaped immediate profits, increased harvests meant that long-term profits were lost as these assets were destroyed. Workers, as well, were harmed when the company's pension plan was terminated to repay the debt from the leveraged buy-out. One can only conclude that greed, and not good business sense, motivated the change from the policy of sustained yield.¹⁸

Second, *non-renewable resources can be used only at the rate at which alternatives are developed or loss of opportunities compensated*. Industries that rely on non-renewable resources, ranging from wilderness areas to fossil fuels, would have an obligation to insure future opportunities to obtain the benefits of these resources. Humans value such

resources both intrinsically and instrumentally. The political realm is the proper place for deciding which resources should be preserved and protected for their intrinsic value. But when such resources are used to produce goods and services, business has a responsibility to use these resources appropriately. Once used, we cannot recover these resources; but we can compensate future people for the loss of these resources by insuring that these future people have equal opportunities for using (but not using up) these or similar resources. Industries that rely on non-renewables have an obligation to compensate for the loss of productive capacity that would follow any use of non-renewable resources.¹⁹ (This principle might also provide a basis for arguing that if some "resources" are irreplaceable, e.g., endangered species, wilderness areas, historic monuments, then an outright legal prohibition to their use is necessary.)

Finally, *wastes and emissions should not be generated at rates that exceed the capacity of the ecosystem to assimilate them*. Waste and inefficiency are more than just economic wrongs, they are moral and environmental wrongs as well. Use of recycled materials in production, producing goods that can be recycled, and recycling by-products of production would be clear responsibilities. Indeed, the responsibility to take back a product after its consumer use, e.g., recycling used cars, should also be a part of business' responsibilities. Again, internalizing these costs would be a significant means for accomplishing this goal.

We can go on to sketch a wider range of more specific responsibilities that comply with these general obligations. First, all external costs should be internalized. Disposal costs for automobiles, for example, should be a part of the initial price. As it does within neoclassical economics, price should play a major role in shaping consumer demand. Obviously, we also have the responsibility to conserve resources. Restoration of an ecosystem to its former productive capacity should be part of this moral minimum. Research and development aimed at finding ecologically benign products and production techniques is another responsibility. For example, utility companies should make a substantial investment for solar energy research and should encourage

conservation. Again, internalizing the costs of such activities would make present prices more accurately reflect true costs. In general, research and development aimed at providing present and future people with an equal opportunity for attaining a decent life should accompany any use of nonrenewable resources.

In summary, industries ought to be modeled on ecosystems.

In such a system the consumption of energy and materials is optimized, waste generation is minimized and the effluents of one process – whether they are spent catalysts from petroleum refining, fly and bottom ash from electric power generation or discarded plastic containers from consumer products – serve as the raw material for another process.²⁰

Obviously this is just a sketch and much work needs to be done to fill in the details. For example, would this model sanction the destruction of a swamp for a housing development? Part of the answer would depend on what one means by an ecosystem, part would depend on our understanding of just compensation, part would depend on the specific ecological facts of the area. My hope is that working out these details would become the future direction of applied business ethics.²¹ Perhaps it is time we de-emphasize the concern with traditional issues like deceptive advertising and conflicts of interest and turn to the details of ecological responsibilities. How, in short, can business meet the increasing demands of a developing world and of an increasingly large future population in ways that do not threaten the productive capacity of the natural ecosystem?

Sustainable development and justification

The final challenge to this alternative is to provide an ethical justification for this model. It is important to note that a variety of rationales are available for this approach. Among environmentalists, one might develop arguments based on the intrinsic value of the natural world (a preservationist approach), or upon more prudential reasons (the conservationist approach). In

what follows, I will sketch justifications that might be developed through an examination of the values underlying economic markets.²² My hope is to provide a rationale that is not incidental to business interests and thus provide some motivating reasons of managerial ethics.

As a first step we should answer the critical challenge that would arise from both classical and neo-classical models of corporate social responsibility: sustainable development may very well be an attractive moral goal, but it is a responsibility that belongs to consumers and government, not to business. Business is, after all, merely a tool for attaining those social goods chosen by citizens through the legitimate political means of markets and law. Even if the economic model of sustainable development were justified, this would not translate into ethical responsibilities at the level of firms and industries.

But to say that consumers and government have these responsibilities is not to deny that management has them as well. Any “moral minimum” implies moral responsibilities on the part of all relevant moral agents. Consider how the prohibition against fraud and coercion functions within the classical model of corporate social responsibility. Fraudulent or coercive transactions frustrate the maximum satisfaction of consumer preferences (happiness) and violate freedom of choice. Even Milton Friedman does not leave the enforcement of these prohibitions to the social consensus that emerge from markets. These constraints upon managerial prerogative are part of the “rules of the game,” insuring that economic markets will attain their goal.

I argue that we should understand the ecological constraints of sustainable development in a similar manner. These, too, should become part of the “rules of the game,” functioning as moral constraints upon managerial authority and necessary to insure the successful operation of the economy over the long-term.

This challenge to sustainable development also underestimates the influence that business has in shaping consumer demand. Consumers don't make their demands in a marketing and advertising vacuum.

Most importantly, however, is the recognition that business decisions are, least partially, respon-