



Published in final edited form as:

*J Organ Behav Manage.* 2009 July 1; 29(3): 215–230. doi:10.1080/01608060903092086.

## The Role of Advocacy Organizations in Reducing Negative Externalities

Anthony Biglan

### Abstract

An externality is a cost that a corporation's actions impose on society. For example, a power plant may emit mercury, but might not pay for the cost of that pollution to the people living near the plant. It is possible to analyze a diverse range of problems of society in these terms, including the health effects of corporate practices, the unsustainability of manufacturing processes, and marketing of products contributing to environmental damage, and economic policies that maintain high levels of poverty due to effective lobbying by the business community. This paper examines the problem of externalities in terms of metacontingencies. Externalities continue precisely because there is no cost to the organizations for practices that impose these costs on third parties. The paper describes the cultural practices needed to influence governments are motivated to make corporations bear the true costs of their practices—costs that are currently imposed on others.

---

One of the central problems in societies' efforts to ensure wellbeing is the presence of negative externalities of corporate practices. A negative externality is a cost imposed on society by the production or marketing of a good or service that the price charged for that good or service does not reflect (Organisation for Economic Cooperation & Development, 1993). For example, a power plant may emit mercury, but may not pay for the cost of that pollution to the people living near the plant. Tobacco companies market an addictive product that leads to cancer, heart disease, and more than 400,000 deaths in the U.S. (Centers for Disease Control & Prevention, 2006), but healthcare providers, employers, governments, smokers, and their families bear most of these costs. Food manufacturers market unhealthy foods that contribute to obesity and cardiovascular disease (Brownell & Horgen, 2004; Pollan, 2006; 2007) but do not pay for the treatment of these problems. A real estate developer builds a housing development, but a local government, and ultimately a city's taxpayers, bear the true costs of roads and sewage systems. We can analyze a diverse range of society's problems in terms of negative externalities, including health effects of corporate practices, the unsustainability of manufacturing processes, the marketing of products that contribute to environmental damage, and economic policies that maintain high levels of poverty due to effective lobbying by the business community.

At the outset, I want to state that this paper is not an attack on capitalism per se. The benefits of capitalism are unquestionable. They include all of the technologies available in the 21st century, including the computer on which I write this paper. It is only through the competitive processes of the marketplace that individuals and organizations have the incentives to innovate to produce better, more efficient, and less expensive goods and services. However, if the justification and support for capitalism is its contribution to human wellbeing, then wellbeing should be our ultimate goal. In that context, it is appropriate to see if societies can evolve

cultural practices that retain the beneficial aspects of capitalism, while reducing its negative externalities.

The problem with externalities is that companies have little incentive to prevent them. Any cost a company incurs affects its profits. Thus, in a market system, corporations tend to select practices that detect and reduce such costs. However, they have no incentive to reduce costs that others bear. Indeed, companies may find it profitable to engage in activities that avoid the imposition of such costs upon themselves. They may litigate or lobby governments to prevent having the costs of externalities imposed on them; they may engage in public relations to obscure or counter the public perception that their actions impose costs on others, as ExxonMobil did regarding global warming, until recently (ExxonMobil Spends Millions... April 22, 2005).

Economists have argued that a straightforward way to deal with the problem of externalities is to impose a tax on practices that impose external costs, so that companies will have an incentive to reduce them (Gwartney & Stroup, 1987). The larger problem, however, is the imbalance between the power of corporations to avoid paying for externalities and the power of the individuals those externalities harm. Perhaps the most striking example involves the consequences of cigarette smoking over the past 50 years. Research in the 1950s showed that cigarette smoking caused lung cancer (Wynder & Graham, 1950); subsequent research showed that it caused heart disease (U.S. Department of Health & Human Services, 1983). In recent years, about 450,000 U.S. deaths have occurred annually due to smoking (CDC, 2006). In *U.S. vs. Philip Morris et al.* (2006), the federal district court in Washington, DC found that the tobacco industry had been aware of the harmful effects of cigarettes since the 1950s, but had conspired to convince the public that smoking's harmfulness was unproven (*U.S. v. Phillip Morris et al.*, 2006). It was not until the 1990s that individual smokers and governments that had borne the cost of smoking's side effects began to recoup any of those costs (National Association of Attorneys General, 1998). Moreover, smoking continues to kill more than 400,000 Americans each year, while the cigarette industry continues to be quite profitable (CDC, 2006; Parker-Pope, 2001). From one perspective, this problem continues because the tobacco companies are better organized and more effective in influencing public policies that might have curbed their practices than were the victims of cigarette marketing in influencing policy to prevent these harms.

The problem of cigarette smoking is only an example of a more generic problem. In general, societies need ways that are more effective at detecting and ameliorating externalities. With this paper, I present a framework for dealing with the problem of externalities. The framework is derived from behavior analysis of human behavior and cultural practices (e.g., Glenn, 1988, <sup>2004</sup>; Glenn & Malott, 2004), which is one branch of evolutionary analysis (Wilson & Biglan, in preparation). It first presents a method for identifying externalities that merit societal efforts to counteract them. It then analyzes the forces that maintain externalities. That analysis suggests that corporations have evolved practices to prevent society from imposing the costs of externalities on the companies. What seems needed, therefore, is strengthening the practices of advocacy groups to influence policies to ameliorate the most costly externalities. The last section of the paper outlines strategies for strengthening advocacy organizations.

## Criteria for Targeting Externalities

Which externalities need targeting? Accepted principles of public health provide a framework for answering that question. In general, public health targets the most common and costly problems (Biglan, 1995). Infectious diseases have long been a high priority because, if they are not controlled, they have the potential to kill many people. Reducing disease depends on reducing the factors that contribute to the disease. Thus, public health has evolved practices

such as sanitation and quarantine to prevent infectious diseases. As health experts have identified smoking, obesity, alcohol abuse, and risky sexual behavior as risk factors for disease, they too become targets for public health. Experts then develop practices to reduce the prevalence of these behaviors. In short, the generic features of public health involve identifying any disease, behavior, or cultural practice that contributes to the prevalence of common and costly diseases and developing practices that reduce the prevalence of that risk factor.

The framework extends to the practices of organizations. Manufacturing processes that lead to worker injury have substantially decreased in the last century. More recently, experts have identified the marketing practices of tobacco companies as a risk factor for smoking and thereby death, and have mounted efforts to restrict those practices (National Cancer Institute, in press; U.S. v. Philip Morris et al., 2006). Indeed, tobacco-marketing practices are a prototypical example of a corporate practice that produces externalities requiring restrictions.

Although these examples involve physical diseases and the factors that contribute to disease, the principles are generally applicable. It is possible to evaluate any practice in terms of the proportion of the population it affects and the extent of harm it causes. We might evaluate a company's decision to reduce or eliminate healthcare costs or to reduce retirement benefits in terms of the number of people that decision affects and the extent of harm done to them. The marketing of fuel inefficient cars may contribute to the emission of greenhouse gases; it is then possible to estimate the impact of that marketing on the environment.

From this standpoint, corporate externalities that currently affect the most people in the most harmful ways should receive top priority. How far should this process go? Societies have slowly evolved increasingly higher standards for the wellbeing of their populations. Child abuse was once commonplace and accepted (deMause, 1990), as was child labor. At a minimum, I would argue that practices shown to have a direct effect on the economic wellbeing, physical illness, or psychological wellbeing of a significant proportion of the population should be the first ones we target. What proportion should we consider significant? Fortunately, for most aspects of wellbeing, there are increasingly accurate estimates of the proportion of the population in developed countries who are not doing well. For example, data exist on the rates of child poverty, major physical illnesses and, to a lesser extent, psychological disorders (Institute of Medicine, in preparation). The criteria for determining what proportion of the population a problem must affect in order for a nation to target that problem reflect its national aspirations. For example, are U.S. citizens satisfied that this country is last out of 25 developed nations in reducing its rate of child poverty?

Of course, the prevalence of a problem in a population is due to multiple influences; corporate externalities may be a minor influence on a problem. Epidemiologists have a procedure for determining the extent to which a risk factor contributes to a problem. It is population-attributable risk, an estimate of the proportion of cases one can attribute to a risk factor. For example, Pierce, Gilpin, and Choi (1999) estimated that advertising for Camel cigarettes influenced 2.1 million young people to become smokers between 1988 and 1998 and that 520,000 of them would eventually die of smoking related illness.

Evidence of this sort is not currently available for most corporate externalities, which points to the need for research to estimate the precise degree to which corporate practices contribute to problematic outcomes. Requiring such evidence will be a counterweight to the risk of imposing unjustified costs on corporations.

Some externalities are difficult to analyze in terms of significant harm to those alive today. A manufacturing or marketing practice (e.g., sale of fuel inefficient cars) that contributes to greenhouse gas accumulation is making no one sick at present. However, its long-term impact on human wellbeing could be very substantial (World Health Organization, 2002; 2008). The

present framework nonetheless applies. We would target a manufacturing process if current scientific evidence finds that it contributes significantly to greenhouse gases because greenhouse gas accumulation threatens a large proportion of the people on the planet.

## General Principles for Reducing Externalities

The economic analysis of externalities is very much in keeping with functional contextualist analyses of human behavior (e.g., Biglan & Hayes, 1996) and analyses of the metacontingencies influencing organizations' actions (Biglan, 1995; Glenn, 1986; 1988). Overwhelming evidence points to the effects consequences have on human behavior (Biglan, 1995). We know that consequences shape most aspects of human behavior, from toilet training (Azrin & Foxx, 1974) to the cooperative behavior in small groups (Bay-Hintz, Peterson, & Quilitch, 1994). Moreover, evidence is growing that material consequences shape and maintain the practices of groups and organizations (Glenn & Malott, 2004). The evolution of group or organizational practices in areas as diverse as agriculture and war making have been analyzed in these terms (Biglan, 1995).

When applied to the problem of externalities, this framework suggests that companies have no incentive to reduce externalities, since they receive no negative consequences for producing them but likely will experience negative ones by reducing or eliminating them. Reducing pollution may increase the cost of a manufacturing process and thereby reduce profits. Eliminating marketing of cigarettes to youth will reduce market share and profits (Biglan, 2004; NCI, in press). In fact, most methods for reducing externalities involve imposing costs on the company that produces them.

Governments can impose taxes that increase the costs of a practice such as polluting the air (Gwartney & Stroup, 1987). In essence, the society charges a company for the costs it has been imposing on society. Society can then use the tax revenues to ameliorate the problem. Market systems, in which companies can buy and sell the right to engage in a costly practice (e.g., polluting), have proven an efficient way to motivate companies to reduce these costs (Congressional Budget Office, 2001). For example, a cap-and-trade system that set limits on sulfur dioxide and allowed low emission companies to sell their rights to emit sulfur dioxide to higher emitting companies was instrumental in reducing these emissions (CBO, 2001). However, the benefits of such systems are limited to situations where the cost tends to be widely dispersed. For example, there is a widespread benefit to reducing carbon emissions because they contribute to worldwide reductions in global warming. However, mercury emissions tend to fall near power plants. A cap-and-trade system for these emissions may result only in some areas having reduced harm while others continue in peril.

Governments can also simply prohibit a practice, as they have done with child labor, chlorofluorocarbons, and some forms of deceptive advertising. This involves increasing the cost of the practice; there are criminal penalties for failure to comply.

The costs of externalities could also increase by changing public perceptions. For example, if the harmful impact of a company's failure to protect its workers' safety is widely publicized, it may affect people's willingness to buy its products. The company may no longer be able to afford to scrimp on worker safety.

The remedies mentioned thus far involve negative consequences for practices that produce externalities. However, this overlooks the possible value of positive consequences for companies that adopt less harmful practices. Research on the *matching law* (McDowell, 1988) has shown that the behavior of individual organisms is a function of the relative rate of consequences for different behaviors. Analogously, it seems likely that one could reduce a corporate practice not only by increasing the cost of the harmful practice, but also by increasing

the profitability of a more desirable alternative practice. For example, pollution might decrease through incentives for installing pollution control equipment. Providing positive consequences for alternative practices may have the additional advantage of reducing resistance to efforts to bring about change in corporate practices.

There are additional possibilities. A corporation might decide to abandon a profitable practice simply because it concludes it is wrong or harmful. In this case, the leadership might come to value reducing a harmful practice more than it values profits, so that it becomes willing to achieve a reduced level of profit. The economics literature seldom countenances such a possibility. However, in a sense, any of the just-described strategies for reducing externalities ultimately involves changing the psychological value of practices and outcomes for the involved parties. Recent work on Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001) provides a framework for understanding how the value of a particular consequence is a function of the relations an individual has with that consequence and other stimuli. For example, a CEO who meets a person with an illness or disability caused by a company practice may come to value that practice in a new light. Similarly, taxing a polluting practice changes the value of the practice for corporate leaders. It is not different in kind from changing the value of a practice because corporate leadership makes psychological contact with the harm that a polluting practice inflicts on others.

However, the biggest problem society faces is not how to control externalities once it has identified them, but how to ensure that societies will take the steps needed to control them. Companies have incentives to prevent the imposition of costs on their externalities and have created sophisticated methods to prevent government action. We need to understand these processes before we can understand how society might develop effective methods of ameliorating negative externalities.

## The Evolution of Corporate Influences on Policymaking

In a capitalist system, corporations adopt and retain or abandon practices because of their impact on profits (Biglan, 1995). Design, manufacturing, and marketing are obvious examples. Companies that design a better product, develop a more efficient method for manufacturing a product, or find the most effective ways to advertise a product are more likely to achieve profits; as a result, their practices will be more likely to continue (Glenn, 2004). Companies that fail to achieve profits because they fail to develop new and better products, manufacture products inefficiently, or fail to advertise them effectively, may become bankrupt. On the other hand, they may abandon ineffective practices in light of their failure to contribute to profitability.

From one point of view, all of this is basic economics. However, we could also usefully view this within an evolutionary framework. Practices are selected by their consequences (Biglan, 2003; Glenn, 2004; Glenn & Malott, 2004; Wilson, 2003; 2007). From this standpoint, the evolution of corporate practices is one example of the tendency of human groups in general to retain practices that contribute to their survival as a group and to abandon those that do not.

Design, manufacturing, and marketing practices are not the only ones selected by market forces, however. Companies will develop and maintain *any* practice if it contributes to profitability. If lobbying the government for a contract is profitable, then the company will invest in lobbying. If supporting politicians who are likely to vote for policies favorable to the company improves the company's profits, the company may encourage its employees to donate to those politicians. If a public relations campaign can make the market more favorable for the company, the company will invest in public relations.

In addition, companies in the same industry typically have some common interests that motivate them to form industry associations to advocate and lobby for policies favorable to the

industry. Trucking companies may lobby to keep fuel taxes low. The cigarette industry created the Tobacco Institute, which systematically obscured the effect of smoking on cancer and heart disease through a well-organized public relations campaign lasting over 40 years (U.S. v. Philip Morris et al., 2006). In general, such industry associations will work to prevent the imposition of externalities' costs on the companies in their industry. These practices evolve because of their contribution to the profitability of the industry.

At an even higher level, the business community has evolved practices that ensure favorable conditions for business in general. Indeed, one can trace the conservative ascendancy of the past 30 years in the United States to the efforts by networks of business organizations and wealthy individuals to create a climate more favorable to business. Lew Lapham (2004) and Eric Alterman (2003) recount a 1971 seminal memo written by Lewis Powell before his appointment to the Supreme Court. Powell had received a request from his neighbor, Eugene B. Sydnor, Jr., who was Chairman of the U.S. Chamber of Commerce Education Committee, to provide ideas about how to improve public support for business. At the time, public trust of business was very low and there were growing concerns in the business community that government would adopt policies that would be increasingly harmful to business.

Powell recommended creating a network of effective advocates for business interests. The memo seems to have been an important impetus for sectors of the business community to support the creation or strengthening of think tanks and advocacy groups, such as the Heritage Foundation and the American Enterprise Institute, that effectively make the case for minimizing taxes and regulation on business. Simultaneously, it stimulated conservative groups to support the education of youth favorable to business interests and to nurture the careers of those they viewed as effective advocates for favorable business policies. Lapham and Alterman document how advocacy for business interests has grown since 1971, how public support for business-friendly policies has increased, and, as a result, how public policy has become more favorable to business in the United States.

The financial consequences to the network of business interests have been enormous and have easily justified their investments. For example, according to Federal Reserve Board (Friedman, 2006), in 1989 the wealthiest one percent of Americans owned 30% of the total wealth of \$25 trillion, or \$7.775 trillion (in 2004 dollars), while the poorest 50% owned 3 percent of the wealth—\$763 billion. By 2004, the total wealth had risen to \$50.25 trillion and the top 1 percent of wealthiest people owned 33% of the wealth or \$16.774 trillion, while the poorest 50% owned \$1.278 trillion only—2.5 percent of total wealth. The Congressional Budget Office analysis of the 2001–2003 tax cuts shows that they disproportionately favored the wealthy, continuing a trend that began in the 1970s (Kamin & Shapiro, 2004). For example, the top 1% of earners received a tax cut of about \$41,000 in 2004, which was 40 times the amount received by those in the middle fifth of the income distribution.

The analysis describes the larger landscape within which efforts to reduce negative externalities must operate. The problem in controlling externalities is not one of identifying practices that are costly to others or even knowing how to reduce those externalities. It is a problem of gaining the influence to implement policies to affect them.

In a society with an elaborate, sophisticated, and well-funded network of organizations working to prevent any imposition of costs for the negative externalities of companies, we need a similar network of organizations to work for the wellbeing of those affected by externalities. Indeed, I would argue that the solution to the vast majority of society's problems requires a network of sophisticated and well-funded organizations working for the common good.

## The Role of Nonprofit and Advocacy Organizations

Nonprofit and advocacy organizations seem to be the primary way to counter corporate externalities. To the extent that persons harmed by a practice can organize to support action in their interest, they may be able—directly or indirectly—to influence corporate practices. I write this, not as a statement of fact, but as a hypothesis that might guide research. In essence, I am arguing that understanding advocacy organizations, their current and potential role in society, and the factors that might improve their impact could contribute to the improvement of human wellbeing, because it could lead to policies and practices to reduce negative externalities.

Advocacy organizations may be nonprofit or for profit. They include organizations that work to address a specific problem, such as heart disease or cancer, but they also include political advocacy organizations that receive no tax exemption for their efforts. In the U.S., nonprofits may not advocate for candidates, but they may advocate for public policies and even for ballot measures. (See <http://www.mapaidline.org/publicpolicy/vote/Restrictions.htm>.)

### The Generic Features of Effective Advocacy

The practices involved in reducing tobacco use, which have increasingly involved efforts to constrain tobacco company practices, provides one of the most well-documented analyses of effective advocacy (Biglan & Taylor, 2000).

The tobacco control movement includes four key features: (a) delivery of epidemiological evidence to the public and policymakers; (b) ongoing research to produce a growing body of evidence-based practices affecting smoking; (c) a network of organizations advocating for effective tobacco measures and/or doing research relevant to the problem; and (d) a surveillance system to track smoking and related practices, such as its marketing (Biglan, under review; Biglan & Taylor, 2000). Each practice involved in this effort contributed to strengthening other practices. As the movement enumerated—and communicated to a growing proportion—of the population the harmful consequences of smoking, support for control efforts and research on control efforts grew. Those efforts, in turn, strengthened the resources available to advocacy organizations.

A virtuous cycle formed in which information about the problem led to greater support for elaborating the extent of the problem and communicating that information to a wider and wider audience. These activities in turn led to policies that further supported the reduction in smoking. Examples of such policies include support for smoking cessation in the healthcare settings and restrictions on tobacco advertising (National Association of Attorneys General, 1998). The success of these evolving practices is evident in the change in both the rate of smoking in the U.S. and the spread of policies and norms that constrain smoking (Biglan & Taylor, 2000). For example, between 1965 and 2002, the rate of male smoking in the U.S. dropped from 51.6 to 25.2% and for females went from 34 to 20% (Bonnie, Stratton, Wallace, & Committee on Reducing Tobacco Use, 2007).

A similar virtuous cycle appears in most successful efforts to address public health problems. Mothers against Drunk Driving publicized deaths due to drunk driving and pushed for stronger laws and greater enforcement to reduce the problem. Notably, a significant reduction in alcohol-related car crashes accompanied these efforts (Fell & Voas, 2006). Those efforts have included control of alcohol sales to minors. MADD has not addressed restrictions on alcohol marketing to the extent warranted, however (Biglan, under review).

### The Consequences Shaping the Practices of Advocacy Organizations

Unlike traditional for-profit organizations, advocacy organizations do not derive their financial support directly from their success in accomplishing their mission. That is, what they achieve

with respect to altering harmful corporate practices does not result directly in funds to sustain their activities. Whereas the success of a for-profit corporation in marketing a product or service at a profit provides the funds that shape and sustain the organization's practices, the success of an advocacy organization may or may not result in further funding. In essence, advocacy organizations must do two things: work for the targeted change and obtain funds to continue its activities. Such organizations may or may not be successful in the latter activity, and their success or failure in raising funds may have little to do with whether they are successful in advancing their advocacy agenda. For example, a health-promoting organization such as the American Cancer Society may conduct a campaign to influence people to quit smoking. It is possible for the campaign to have little influence on people quitting, but nonetheless to generate contributions to the organization because people perceive that the ACS is doing something useful. Conversely, the campaign could be very successful but be very costly and generate no contributions to the organization. Understanding these two different contingencies is critical in understanding how to strengthen the effectiveness of advocacy organizations in society.

### **Evolving Policies that Strengthen Advocacy Organizations**

We are unlikely to have a significant effect upon a wide range of societal problems unless we strengthen the effectiveness of advocacy organizations. Typically, people concerned about a particular issue will seek to strengthen the resources and effectiveness of organizations working on that issue. However, a more generic analysis of the problem may point to policies that could improve the support and effectiveness of organizations working on the entire range of problems, which includes preventing harm resulting from externalities.

The fundamental problem in trying to evolve organizational practices to control corporate externalities effectively is to create a set of contingencies to shape and maintain effective practices among advocacy organizations. At the core, we must ensure that organizations working on negative corporate externalities have the resources necessary to advocate effectively. However, we also need to ensure that their advocacy practices are, in fact, effective. Here is a set of policies that could sharpen the contingencies that influence advocacy organizations to act effectively in the interest of public wellbeing.

**Justification of the public benefit**—If we are to have a class of organizations that receives increased societal support for working on externalities, we need societal agreement about what constitutes a sufficiently important externality. The public health principles enumerated above provide some guidance. Only externalities that affect the health of a significant proportion of the population would be targets and therefore only organizational practices targeting these externalities would qualify for enhanced public support. Examples include manufacturing and marketing practices shown through rigorous empirical research—including experimental designs—to harm public health. Elsewhere, I have argued that, in order to target a marketing practice there would need to be experimental evidence that the practice influences people to engage in an unhealthy behavior (Biglan, under review). That case is clear with respect to tobacco marketing, but the evidence is not yet clear regarding marketing of alcohol and unhealthy foods; experimental studies of the impact of current marketing practices for these products simply do not exist. For example, experimental analyses of the impact of exposure to advertising of these products might show that exposure significantly increases both the *intentions* of young people to use these products or their *actual use* of them. Other practices to target under this standard include those that have proven to contribute to global warming and those that increase the proportion of people living in poverty, such as payday loans (Federal Trade Commission, 2008).

**Transparency**—If advocacy organizations had a mandate to publish their goals annually, and to report on their actions and on the success or failure in achieving those goals, contributors



and the public could gauge more precisely the value of those efforts. Such transparency would sharpen the contingency between effective advocacy and funding, as money would tend to flow to the organizations showing the greatest success. Nonprofit organizations are currently required to disclose their activities in some detail, but the transparency I am suggesting would involve considerably more detail and precision.

**Greater tax benefits for contributions to qualifying organizations**—When organizations meet the above criteria, their contributors could receive increased tax benefits. Although money donated to any nonprofit organization is currently deductible from one's taxes, the amount deductible for giving to these organizations might increase. For example, people might be able to deduct from their taxes 150% of what they donate.

### **Advocating for Policies that Strengthen Advocacy Organizations**

In essence, I propose creation of a special class of nonprofit advocacy organizations with the power and support to advocate for policies necessary to reduce corporate externalities. Any effort to create such a system will undoubtedly face opposition, not only from organizations with externality-producing practices, but also by advocacy organizations that would not qualify for the proposed benefits. Thus, achieving policies that could strengthen advocacy organizations would require its own effective advocacy.

Above I argued that corporate practices to prevent curtailing of externalities exist at three levels—individual companies, entire industries, and the business community as a whole. A similar analysis fits the advocacy sector. Individual organizations work on controlling specific externalities. Networks of organizations work on problems such as pollution, unsustainable environmental practices, tobacco control, and so on. However, I have been unable to identify organizations that work generally for policies to reduce externalities. Having such organizations may be essential for achieving the kinds of policies I propose. The generic analysis provided here is the intellectual framework that justifies creating such overarching advocacy organizations.

It may seem unlikely that society would ever agree to the types of policies I suggest. Corporate lobbies against them will claim they are radically at variance with the traditions of Western capitalist democracies. However, the history of the evolution of other cultural practices that have expanded human wellbeing suggests a different view. Consider London in the 19th century, when it was the world's largest and wealthiest city: it was common for raw human sewage to run freely in the streets and empty into rivers that provided the city's drinking water. The city leaders at that time would have seen our modern sanitation practices as radical indeed.

Consider the more recent example of how the U.S. and other developed nations have evolved economic management practices to reduce significantly the boom and bust business cycles that were common until the mid-20th century (Moynihan, 1975). Most experts once considered it a radical idea to manage an economy to prevent inflation and unemployment.

In each instance, practices emerged that improved human wellbeing. This happened because empirical evidence accumulated regarding the harm of the existing practices and sound evidence guided the implementation of more effective policies.

### **Conclusion**

Scientists who study organizations are in a unique position to analyze externalities of corporations and the contingencies that influence both for-profit organizations and those working to counter negative corporate externalities. With this paper, I hope I have provided a framework to stimulate further research on these important problems. As evidence mounts that

global warming is occurring much faster than earlier predicted (Lean, 2007), it becomes imperative for scientists to analyze how we can alter corporate contributions to this and other problems.

In 50 years, people may look back on this era and see it as a time when the scientific and public health communities failed to conduct the bold analyses needed to influence corporate practices and, as a result, societal systems that ensured human wellbeing collapsed (Diamond, 2004). On the other hand, they may say that, thankfully, science conducted effective contextual analyses that brought the practices of for-profit corporations in line with the long-term needs of human beings. Behavior analysis has the tools to specify the necessary actions of advocacy and for-profit organizations and to analyze the impact of changing the consequences of those actions. Their use on this problem could prove to be one the field's greatest contributions to human wellbeing.

## Acknowledgments

The National Cancer Institute (CA38273) and the National Institute on Drug Abuse (DA018760) provided financial support for the completion of the work on this manuscript. The author wishes to thank Christine Cody for her editorial assistance.

## References

- Alterman, E. What liberal media?. New York: Basic Books; 2003.
- Azrin, NH.; Foxx, R. Toilet training in less than a day. NY: Simon & Schuster; 1974.
- Bay-Hintz AK, Peterson RF, Quilitch HR. Cooperative games: A way to modify aggressive and cooperative behaviors in young children. *Journal of Applied Behavior Analysis* 1994;27:435–446. [PubMed: 7928788]
- Biglan, A. Changing cultural practices: A contextualist framework for intervention research. Reno, NV: Context Press; 1995.
- Biglan A. Selection by consequences: One unifying principle for a transdisciplinary science of prevention. *Prevention Science* 2003;4:213–232. [PubMed: 14598995]
- Biglan, A. Direct written testimony in the case of the U.S.A. vs. Phillip Morris et al. Washington, DC: U.S. Department of Justice; 2004. Available online. Last accessed 4/30/08 at <http://www.ori.org/oht/testimony.html>
- Biglan A. Challenges to the further success of prevention science. under review.
- Biglan A, Hayes SC. Should the behavioral sciences become more pragmatic? The case for functional contextualism in research on human behavior. *Applied and Preventive Psychology* 1996;5:47–57.
- Biglan A, Taylor TK. Why have we been more successful in reducing tobacco use than violent crime? *American Journal of Community Psychology* 2000;28:269–302. [PubMed: 10945118]
- Bonnie, RJ.; Stratton, K.; Wallace, RB. Committee on Reducing Tobacco Use. Ending the tobacco problem: A blueprint for the nation. Washington, DC: IOM; 2007.
- Brownell, KD.; Horgen, KB. Food fight: The inside story of the food industry, America's obesity crisis, and what we can do about it. New York: McGraw-Hill; 2004.
- Centers for Disease Control and Prevention. Fact sheet: Cigarette smoking-related mortality. U.S. Department of Health and Human Services; 2006. Online. Last accessed May 2, 2008 at [http://www.cdc.gov/tobacco/data\\_statistics/factsheets/cig\\_smoking\\_mort.htm](http://www.cdc.gov/tobacco/data_statistics/factsheets/cig_smoking_mort.htm)
- Congressional Budget Office. An evaluation of cap-and-trade programs for reducing U.S. carbon emissions. Washington, DC: Congress of the United States; Jun. 2001 Online. Last accessed 5/1/08 at <http://www.cbo.gov/ftpdocs/28xx/doc2876/CapTrade.pdf>
- deMause L. The history of child assault. *The Journal of Psychohistory* 1990;18:1–29. [PubMed: 11622350]
- Diamond, J. Collapse: How societies choose to fail or succeed. New York: Viking Adult; 2004.
- ExxonMobil spends millions funding global warming skeptics. Friday, April 22. 2005 Available online. Last accessed 5/2/08 at <http://www.msnbc.msn.com/id/16593606/>

- Federal Trade Commission. Payday loans equal very costly cash: Consumers urged to consider the alternatives (FTC Consumer Alert). Mar. 2008 Available online. Last accessed 5/2/08 at <http://www.ftc.gov/bcp/edu/pubs/consumer/alerts/alt060.shtm>
- Fell JC, Voas RB. Mothers Against Drunk Driving (MADD): The first 25 years. *Traffic Injury Prevention* 2006;7:195–212. [PubMed: 16990233]
- Friedman, L. Inequality counts. *The Nation*. 2006. Available online. Last accessed on 5/2/08 at <http://www.thenation.com/doc/20060529/friedman>
- Glenn SS. Metacontingencies in Walden Two. *Behavior Analysis and Social Action* 1986;5:2–12.
- Glenn SS. Contingencies and metacontingencies: Toward a synthesis of behavior analysis and cultural materialism. *The Behavior Analyst* 1988;11:161–179.
- Glenn SS. Individual behavior, culture, and social change. *Behavior Analyst* 2004;27:133– 151.
- Glenn, SS.; Malott, ME. Complexity and selection: Implications for organizational change; *Behavior and Social Issues*. 2004. p. 89-106. Available online. Last accessed 5/2/08 at [http://www.bfsr.org/BSI\\_13\\_2/Contents.html](http://www.bfsr.org/BSI_13_2/Contents.html)
- Gwartney, JD.; Stroup, RL. *Economics: private and public choice*. San Diego: Harcourt Brace, Jovanovich; 1987.
- Institute of Medicine. IOM report on effective interventions. Washington, DC: Institute of Medicine; In preparation
- Kamin, D.; Shapiro, I. Center for Budget and Policy Priorities; 2004. Studies shed new light on effects of Administration's tax cuts. Available online. Last accessed 5/2/08 at <http://www.cbpp.org/8-25-04tax.htm>
- Lapham L. Tentacles of rage. *Harper's Magazine*. 2004
- Lean, G. Global warming 'is three times faster than worst predictions.'. *The Independent*. 2007. Available online. Last accessed 5/2/08 at <http://www.independent.co.uk/environment/climate-change/global-warming-is-three-times-faster-than-worst-predictions-451529.html>
- McDowell JJ. Matching theory in natural human environments. *The Behavior Analyst* 1988;11:95–109.
- Moynihan DP. A brief narration. *American Psychologist* 1975;30:939–940.
- National Association of Attorneys General. Master Settlement Agreement. Nov. 1998 Last accessed 5/1/08 at <http://www.naag.org/backpages/naag/tobacco/msa>
- National Cancer Institute. The use of the media to promote and discourage tobacco use (NCI Monograph 20). Washington, DC: National Institutes of Health; In press
- Organisation for Economic Co-operation and Development. Glossary of industrial organisation economics and competition law. 1993. compiled by R.S. Khemani & D.M. Shapiro, commissioned by the Directorate for Financial, Fiscal and Enterprise Affairs, OECD. Web glossary accessed 7/24/08 <http://stats.oecd.org/glossary/detail.asp?ID=3215>
- Parker-Pope, T. *Cigarettes: anatomy of an industry from seed to smoke*. New York: Norton; 2001.
- Pierce JP, Gilpin EA, Choi WS. Sharing the blame: smoking experimentation and future smoking-attributable mortality due to Joe Camel and Marlboro advertising and promotions. *Tobacco Control* 1999;8(1):37–44. [PubMed: 10465814]
- Pollan, M. *The omnivore's dilemma*. New York: Penguin USA; 2006.
- Pollan, M. Unhappy meals. *The New York Times Magazine*. 2007 Jan 28. Available online. Last accessed 9/10/07 at <http://www.michaelpollan.com/article.php?id=87>
- U.S. Department of Health and Human Services. The health consequences of smoking: cardiovascular disease. A report of the Surgeon General. Rockville, MD: U.S Department of Health and Human Services, Public Health Service, Office on Smoking and Health; 1983. DHHS Publication PHS 84–50204. Available online. Last accessed 7/24/08 at [http://profiles.nlm.nih.gov/NN/B/B/T/D/\\_/nnbtd.pdf](http://profiles.nlm.nih.gov/NN/B/B/T/D/_/nnbtd.pdf)
- United States v. Philip Morris et al., Civil No. 99-CV-02496GK (U.S. Dist. Ct., D.C., 2006).
- Wilson, DS. *Darwin's cathedral*. Chicago: University of Chicago Press; 2003.
- Wilson, DS. *Evolution for everyone: How Darwin's theory can change the way we think about our lives*. New York: Delacorte Press; 2007.

World Health Organization. World Health Report 2002: Reducing risks, promoting healthy life. Geneva: WHO; 2002.

World Health Organization. Global climate change and health: an old story writ large. 2008. WHO Website. Last accessed 5/9/08 at <http://www.who.int/globalchange/climate/summary/en/8>

Wynder EL, Graham E. Tobacco smoking as a possible etiologic factor in bronchiogenic carcinoma: a study of 684 proven cases. *Journal of the American Medical Association* 1950;143:329–336. [PubMed: 15415260]