

Hybrid Vehicles, Consumer Choice, and the Ethical Obligation of Business

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Introduction

The paper on hybrid vehicles by Marcus and Geffen (2005) is very informative, and also, from a public policy standpoint, very provocative in its prescriptive call for heightened government regulation and increased petroleum taxes. Hybrid vehicles clearly represent a key area in the greater debate on economic and environmental sustainability, given both the recent and projected proliferation of hybrids in the consumer marketplace and their potential to provide energy efficiency gains. In their discussion, Marcus and Geffen raise a number of issues and questions to consider. I focus my comments on three specific aspects of the debate that require better understanding: the rebound effect, the ethics of influencing consumer behavior, and practical considerations.

The Rebound Effect

The central concern of Marcus and Geffen is that increased commercialization of hybrid vehicles may not necessarily lead to less petroleum consumption, and in fact could even *increase* overall consumption. They argue that this outcome arises from consumer 'snapback' (commonly known as the 'rebound effect'), which is the idea that, in this context, consumer gasoline consumption will grow to offset any efficiency gains.

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Presumably this could result from several mechanisms.¹ First, when the time comes to purchase a hybrid, owners of smaller conventionally-powered vehicles may be more inclined to buy medium or large hybrids (e.g., hybrid sport utility vehicles) than hybrids of a similar size to their previously owned conventional vehicles. Second, those who purchase hybrids may simply choose to drive more (e.g. relocating to exurbs, voluntarily adopting longer commutes). Both of these mechanisms would minimize or negate any additional energy efficiency arising from the hybrid technology itself.

However, although the general existence of a consumer rebound effect in response to efficiency gains has been observed in various settings (illustrated here by Marcus and Geffen's references to driver safety data and consumer diet preferences), the specific mechanisms by which consumers might change their behavior with respect to hybrid vehicles need to be better understood. Are hybrid buyers likely to change the type or class of vehicle they buy, opting for something larger? In other words, will owners of small conventional sedans really tend to buy a hybrid SUV, simply because one is available on the market? Are hybrid buyers likely to change their driving habits, ultimately driving more? That is, will hybrid owners really tend to dramatically increase the average length of their commutes? Good answers to these questions require further analysis and explanation, especially given the existing empirical work on the fuel economy rebound effect, which indicates that the effect, although potentially nontrivial, is much smaller than the potential efficiency gain (e.g., Greene, 1992; Greene, Kahn, and Gibson, 1999).

Relatedly, we must examine the extent to which consumer choices are assumed to be manifestations, as Samuelson (1938) originally suggested, of 'revealed preferences.'² Marcus and Geffen suggest that the tendency of auto manufacturers will be to push large vehicles and that of consumers will be to buy them, but if consumer choices truly represent embedded demand, as rational choice theory advocates, then an additional question is raised about the true benefit or detriment of large hybrids.

Ultimately, from a fuel efficiency standpoint, isn't a hybrid Hummer still preferable to a conventional Hummer? Marcus and Geffen insightfully point out the irony of a consumer who might strive to possess both a social conscience and a hybrid SUV—something that may be increasingly encouraged by automakers that use hybrid technology to increase engine power, rather than fuel efficiency (e.g., Sabatini, 2005). But unless the

consumer rebound effect is extreme, with *all* hybrid consumers either buying larger vehicles or driving longer distances, isn't there still *some* level of overall fuel efficiency gain? From a sustainability standpoint, aren't hybrid SUVs still a 'better' choice for consumers who would buy SUVs anyway? Wouldn't a hybrid minivan help reduce the gasoline consumption of a family already driving a conventional minivan? I suggest that the answer is yes. Because a 100 percent rebound effect appears completely implausible, some level of net efficiency gain should be facilitated by the increased commercialization of hybrid vehicles, and the efficiency gain may in fact be quite substantial. However, it is also important to consider whether this net efficiency gain may still turn out to be inadequate—that is, environmentally unsustainable—in the long term.

The Ethics of Influencing Consumer Behavior

Focusing our concern on long-term environmental sustainability highlights an underlying set of crucial questions: To what extent is influencing consumption patterns an ethical imperative? Is influencing consumption—in this case, reducing consumer fuel consumption—the 'right' thing to do? Why or why not? What is government's role? What is the obligation of business in changing consumer behavior? The difficulty of grappling with these questions is apparent:

Small wonder that these questions are addressed only obliquely, if at all. They are hard to answer, and when answers emerge they can be problematic, for they have an awkward tendency to challenge deeply held assumptions about progress and the "good life;" they call into question the very idea of consumer sovereignty, a cornerstone of mainstream economic thinking. They also challenge prevailing distributions of power and influence and smack of hypocrisy, coming as they so often do from those who consume the most. To confront such questions is to bite off, in one chunk, a large and vexing body of social, political, and cultural thought and controversy. It is no exercise—intellectual or practical—for the timid (Princen, Maniates, and Conca, 2002, 1).

These are questions that many discussions of consumption and sustainability, clothed in political ideology, tend to either ignore or obscure. Our

individual answers to this underlying set of questions largely frame how we each react, for instance, to Marcus and Geffen's call for increased government regulation.

By acknowledging these questions and attempting to wrestle with them, we must move beyond simplified ways of viewing consumption. For example, because consumption as a rational 'demand function' provides an incomplete picture of consumer behavior and its implications, meaningful analyses must also incorporate the insights arising from critiques of consumer sovereignty. In turn, it is by no means self-evident that all consumption is wholly undesirable, or that consumer choices solely reflect a sociological quest for meaning, rather than arising (at least in part) from value creation and trade.³ I suggest that lurking just beneath the surface of any discussion about hybrid vehicles—as well as any other issue involving economic and environmental sustainability—is this fundamental set of questions that may be overlooked or glossed over; at some point, addressing these key questions must become an active part of the discussion. The serious matter of determining the ethical obligation of business organizations in encouraging sustainable consumption, for example, is unaddressed by Marcus and Geffen, but may be a key issue to resolve in order to achieve any theoretical or practical progress.⁴

Approaches to Shaping Consumption

For the sake of argument, assume that we can all momentarily agree on the answers to those questions—that yes, there is some acknowledged level of moral obligation to influence societal consumption patterns toward sustainability, and business organizations bear some specified portion of that obligation. The salient questions then become practical and empirical. How can consumption patterns be meaningfully influenced? Which approaches are most effective?

Consider the call for increased regulation; in addition to their suggestion to adjust consumer fuel taxes, Marcus and Geffen suggest that a regulatory approach might also focus on raising corporate average fuel efficiency (CAFE) standards. From a public policy perspective, would such initiatives be more palatable to legislators, businesses, and individual consumers if they included provisions for trading fuel efficiency credits, or offsetting fuel taxes with income tax deductions?⁵ What other ideas would increase the likelihood of adopting stricter standards and higher taxes in the first place?

What other approaches could be employed to influence consumer attitudes about sustainability in a lasting way?

From a practical standpoint, this is the core dilemma of any attempt—regulatory or not—to impact consumer behavior: how to influence actual consumer sentiment. Encouraging consumers to exercise restraint, for example, is something that has proven difficult to manage, and largely unsuccessful, in the past. The attempt to influence petroleum consumption during the oil shock of the 1970s may serve as a cautionary tale. In July 1979 President Carter

... summoned his fellow citizens to change course, to choose self-sufficiency and self-reliance—and therefore true independence. But the independence was to come at the cost of collective sacrifice and lowered expectations.

Either Americans could persist in pursuing "a mistaken idea of freedom" based on "fragmentation and self-interest" and inevitably "ending in chaos and immobility," or they could opt for "true freedom," which Carter described as "the path of common purpose and the restoration of American values."

How the United States chose to deal with its growing reliance on foreign oil would determine which of the two paths it followed. Energy dependence, according to the president, posed "a clear and present danger" to the nation, threatening the nation's security as well as its economic well-being. Dealing with this threat was "the standard around which we can rally." "On the battlefield of energy," declared Carter, "we can seize control again of our common destiny."

How to achieve this aim? In part, by restricting oil imports, investing in alternative sources, limiting the use of oil by the nation's utilities, and promoting public transportation. But Carter placed the larger burden squarely in the lap of the American people. "There is simply no way to avoid sacrifice," he insisted, calling on citizens as "an act of patriotism" to lower thermostats, observe the highway speed limit, use carpools, and "park your car one extra day per week."

But [Carter's] policy prescription reflected a fundamental misreading of his fellow countrymen. Indeed, as Garry Wills has observed, given the country's propensity to define itself in terms of growth, it triggered "a subtle panic [and] claustrophobia" that

Carter's political adversaries wasted no time in exploiting. By January 1980, it had become evident that any program summoning Americans to make do with less was a political nonstarter, (Bacevich, 2005, 44-45).

Such failed past approaches to encouraging reduced consumption illustrate how difficult it can be actually influence actual consumer sentiment, which means that an effective initiative may need to approach the issue much more broadly. Thus the regulatory role that Marcus and Geffen call for may indeed constitute an important part of the effort to influence consumption patterns, but I suggest that other factors, such as the active involvement of business organizations (from some standpoint other than just compliance), may also have an important role in the initiative.

Significant scholarly work remains in order for us to not only better understand the ethical role of business in shaping environmentally sustainable consumption patterns, but also how such a shaping process might be accomplished.

Notes

1. For a good theoretical overview of consumption and the rebound effect, see Hertwich (2005), which conceptually discusses a number of direct and indirect rebound effects related to consumption and sustainability.
2. Rational choice theory, as extended by scholars such as Lancaster (1966) and Becker (1976), builds on this tradition. What emerges from this perspective is the notion that economic consumption improves overall well-being, and therefore, the aim of public policy is to increase economic consumption (e.g., Vincent and Panayotou, 1997). This view permeates popular culture, and is a point on which even recent political rivals for the American Presidency seem to agree (*The New York Times*, 2004).
3. For a good survey of the theoretical debate about consumption, viewed as everything from a catalyst for social well-being to a self-destructive social pathology, see Jackson (2005). An integrative view might focus on economic production and consumption within the context of the world's greater natural ecology, a "rethinking [of] of how humans relate to nature" (Princen, 2002, 41), as explained by Adolphson (2004).
4. Freeman, Pierce and Dodd (2000) argue that business organizations can and should occupy a leadership role in encouraging sustainable consumption.

5. This idea is already being applied to the problem of vehicle emissions by several organizations. For example, the startup company TerraPass allows drivers to 'pay' for the smog they produce by trading the smog allowances on the Chicago Climate Exchange, a marketplace for industrial emissions (Parker, 2005).

References

- Adolphson, D. L. 2004. "A New Perspective on Ethics, Ecology, and Economics," *Journal of Business Ethics*, 54(3), 201-213.
- Bacevich, A. J. 2005. "The Real World War IV," *Wilson Quarterly*, 29(1), 36-61.
- Becker, G. 1976. *The Economic Approach to Human Behavior*. Chicago: University of Chicago Press.
- Freeman, R. E., J. Pierce, and R. H. Dodd. 2000. *Environmentalism and the New Logic of Business*. New York: Oxford University Press.
- Greene, D. L. 1992. "Vehicle Use and Fuel Economy: How Big is the 'Rebound' Effect?," *The Energy Journal*, 13(1), 117-143.
- Greene, D. L., J. R. Kahn, and R. C. Gibson. 1999. "Fuel Economy Rebound Effect for U.S. Household Vehicles," *The Energy Journal*, 20(3), 1-31.
- Hertwich, E. G. 2005. "Consumption and the Rebound Effect: An Industrial Ecology Perspective," *Journal of Industrial Ecology*, 9(1-2): 85-98.
- Jackson, T. 2005. "Live Better by Consuming Less? Is There a 'Double Dividend' in Sustainable Consumption?," *Journal of Industrial Ecology*, 9(1-2), 19-36.
- Lancaster, K. 1966. "A New Approach to Consumer Theory," *Journal of Political Economy*, 7(3), 132-157.
- Marcus, A., and D. A. Geffen. 2005. "Hybrids: Hype or Hope?," *Business and Professional Ethics Journal*, this issue.
- Parker, A. 2005. "Service Allows Drivers to Assuage Guilt About Auto Pollution." April 8, 2005, *Philadelphia Inquirer*.
- Princen, T. 2002. "Consumption and its Externalities: Where Economy Meets Ecology," in T. Princen, M. Maniates, and K. Conca (eds.), *Confronting Consumption*, 23-42. Cambridge, Massachusetts: The MIT Press.
- Princen, T., M. Maniates, and K. Conca. 2002. "Confronting Consumption," in T. Princen, M. Maniates, and K. Conca (eds.), *Confronting Consumption*: 1-20. Cambridge, Massachusetts: The MIT Press.
- Sabatini, J. 2005. "The Hybrid Emperor's New Clothes." July 31, 2005, *The New York Times*.
- Samuelson, P. 1938. "A Note on the Pure Theory of Consumers' Behaviour" *Economica*, 5(17), 61-71.
- The New York Times. 2004. Transcript of Debate Between Bush and Kerry, With Domestic Policy the Topic, October 14, 2004, *The New York Times*.
- Vincent, J. R., and T. Panayotou. 1997. "Consumption: Challenge to Sustainable Development . . . or Distraction," *Science*, 276(5309), 53-57.