

07-049

# **Behavioral Decision Research, Legislation, and Society: Three Cases**

**Max H. Bazerman**

Copyright © 2007 by Max H. Bazerman

Working papers are in draft form. This working paper is distributed for purposes of comment and discussion only. It may not be reproduced without permission of the copyright holder. Copies of working papers are available from the author.

## **Behavioral Decision Research, Legislation, and Society: Three Cases**

**Max H. Bazerman**  
**Harvard Business School**

Throughout my career, I have been an active consumer of the news, starting my day by reading the *New York Times* reasonably thoroughly – as least for a business-school professor. Often, I have been appalled by the nature of the decision-making processes used in important policy domains. My critical stance has continued as the U.S. government has used confused decision making to launch a disastrous war in Iraq, missed clear signals of the need to defend our nation against extremists far in advance of the 9/11 tragedy (Bazerman and Watkins, 2004), and acted as the main barrier to the global response to climate change – which may well prove to be the greatest disaster of the Bush administration (Bazerman, 2006). Aside from my daily consumption (and criticism) of public-policy news, as a behavioral decision researcher, I have played a small part in three very different episodes of Washington policy-making since 2000. These experiences allow me to highlight a number of generalizable deficiencies in the policy-making arena from the lens of a behavioral decision researcher.

For readers who do not know me, I study imperfections in how people make decisions. After getting my doctorate, I spent the last 20 years of the past millennium running controlled experiments to better understand how human judgment departs from rationality in systematic and predictable ways. Behavioral decision research has its roots in the concept of “bounded rationality” offered by Herbert Simon in the 1950s (March and Simon, 1958; Simon, 1957). The field came to life as an intense area of inquiry with the groundbreaking research of Daniel Kahneman and Amos Tversky in the 1970s (Kahneman and Tversky, 1979; Tversky and Kahneman, 1974). Both Simon and Kahneman eventually won the Nobel Prize in Economics for their work, though neither of them are economists (Tversky passed away too early to receive the prize with Kahneman). Since the 1970s, behavioral decision research has boomed, cutting across psychology, economics, law, medicine, marketing, negotiations, and many other areas of application. In the stories that follow, I will describe relevant aspects of this field.

Prior to 2000, I had little direct exposure to Washington, D.C., other than running a souvenir stand at the Redskins’ stadium while a college student at the University of Pennsylvania in the mid-‘70s. I attended a few conferences in D.C., worked a bit with a D.C.-based not-for-profit, and liked eating Ethiopian food in the Adams Morgan section of the city, but I had no professional interaction with the federal government. Since 2000, I have visited Washington fairly regularly,

and the three primary reasons for my travels provide the stories described in this paper.

In contrast to using controlled laboratory experiments, which offer a clear method for inferring cause-effect relationships, I will be using data from three personal stories to provide opinion and analysis. I will tell the three stories, which come from very different political institutions, in chronological order. The first story deals with a policy-making process at the Securities and Exchange Commission (SEC). The second deals with an administrative legal proceeding regarding anti-trust enforcement by the Federal Trade Commission (FTC), with precedent-setting implications. The last story deals with the Department of Justice's (DOJ) civil lawsuit against the tobacco industry, arguably the largest civil litigation in history.

In each story, I will highlight the insights that I see behavioral decision research providing to an important policy context. While I clearly see an important role for economic logic in the policy-making process, I criticize economic theory when used at the exclusion of other social science knowledge. Indeed, my central goal is to provide evidence for the need for social sciences other than economics to be brought to the legal and policy-making domains. Later in the article, I will discuss the role of different theories from social science in the policy formulation process.

### **The Impossibility of Auditor Independence**

In 1997, I published an article with Kimberly Morgan and George Loewenstein entitled "The Impossibility of Auditor Independence" (Bazerman et al., 1997). As far as we knew, through the early part of 2000, no human being had read our published paper. No one requested a reprint (at least, not from me). The paper was about auditing, after all, and in 1997, few people were interested in that topic. It turned out, however, that someone did read the published paper: Lynn Turner, then chief accountant at the SEC. As a result, in 2000, I learned that the SEC was interested in hearing about our work. Loewenstein and I headed off to Washington and each provided 10 minutes of insights from our 1997 paper to the SEC, which was holding hearings on auditor independence.

Our argument was very simple. The primary reason for auditing to exist as an institution is to provide stakeholders with an independent assessment of the financial condition of firms. To understand the concept of auditor independence, consider former Chief Justice Warren Burger's words from a unanimous U.S. Supreme Court ruling in the case of *United States v. Arthur Young & Co.*:

The independent auditor assumes a public responsibility transcending any employment relationship with the client. The independent public accountant performing this special function owes ultimate allegiance to the corporation's creditors and stockholders, as well as to [the] investing

public. This "public watchdog" function demands that the accountant maintain total independence from the client at all times and requires complete fidelity to the public trust.

My colleagues and I read "total independence" to mean that the auditor should not be affected by any self-serving concerns. Without such independence, it is unclear why the institution of auditing would exist (Bazerman et al., 1997; Loewenstein et al., 2002). Yet, we argue that auditors have not been independent, and that this lack of independence is related to the failure of auditors to notice the scandalous finances of firms such as Enron, Worldcom, Adelphia, Bristol-Myers Squibb, Global Crossing, Haliburton, Qwest, Tyco, and Xerox. The way in which auditing has been institutionalized—prior to the Enron scandal, between the scandal and the Sarbanes-Oxley Act of 2002, and today—clarifies that auditors were not, and are not, independent. In addition, the leading auditing firms have done a great deal to keep independence from the industry in order to protect their profits (Bazerman et al., 2006).

Three conditions make auditor independence a farce as currently practiced in the United States. First, auditing firms profit by being rehired by their clients to perform audits; thus, they have an incentive to try to please their clients with their (supposedly independent) auditing work. Second, auditors also sell other services to their clients, such as consulting work, and are unlikely to get this work if the clients are not happy with their auditors. Finally, individual employees of auditing firms often are hired by their present and former clients.

Psychologists have long known that when people have a vested stake in viewing data in a particular manner, they are not capable of making an unbiased, or independent, assessment (Babcock and Loewenstein, 1997). For example, spouses are not capable of "independently" reporting the share of household work that they do (Ross and Sicoly, 1979), academics are not capable of "independently" reporting the share of work on a paper that is due to their efforts (Epley et al. 2006), and lawyers are not capable of ignoring their own financial interests in advising clients (Moore et al., 2005). Thus, it follows that auditors—even honest ones—who are rewarded for pleasing their clients are not capable of providing independence. The nature of the human mind makes this independence impossible.

I have just summarized our arguments dating back to 1997 and our presentation to the SEC in 2000. Quite honestly, these arguments are so simple that psychologists have asked us if there is anything conceptually new about them—and the answer is "no." Rather, we simply applied a well-known social psychological effect to the institution of auditing and concluded that it is not organized to allow accountants to provide independent audits. We also identified a number of conditions in the auditing industry that exacerbated the likelihood of self-serving biases, including the ambiguous nature of accounting, the fact that

auditors approve the decisions of others rather than form their own opinions from scratch, and the fact that penalties for easy approval were distant and that human beings tend to discount future events (Bazerman et al., 2002). We did not argue against the idea that some audits were intentionally corrupted, but argued that a much more common corrupting influence on audits were the unintentionally biased processes that auditors brought to the problem.

Have I convinced you that auditors should not be rehired by those they are auditing, that auditors should not be allowed to sell their clients other services, and that they should not be allowed to take jobs with their clients? I hope so. Unfortunately, we did not convince the SEC. Its commissioners wanted to know if we could identify a “smoking gun” – a specific audit that was biased because the auditing firm had provided other services to its client. We could not. The commissioners also heard from the CEOs of three of the then-Big Five accounting firms (now the Final Four after the collapse of Arthur Andersen), who asserted that they were professionals who could be trusted to be unbiased. (While professionalism could logically provide protection against intentional corruption, it could not reduce unethical behavior that the protagonist was unaware of committing.) Also testifying were auditing professors and economists who argued for the need for a cost-benefit analysis of the situation before taking any drastic action. The commissioners also heard from members of Congress who had been lobbied by the Big Five, and who threatened the SEC with punishment if they acted too strongly. The SEC backed down, making only minor changes to the industry, such as providing added requirements to disclose conflicts of interest, which research shows to be ineffective (Cain et al., 2005).

One possible explanation for the SEC’s decision is that Loewenstein and I were ineffective at conveying our argument. As an alternative, I offer three different and additive explanations about the policy formation process from this episode. First, economics is the dominant social science in Washington, second only in influence to the legal profession, and evidence from other rigorous social sciences is often ignored (Bazerman and Malhotra, 2006). My colleagues and I were not the first to note threats to auditor independence. But, prior to and during the SEC hearings, and to this day, auditing professors argued for a cost-benefit analysis of whether corrective actions were worth the cost (Antle, 1984; Nelson, 2006). This argument suggests that independence had special status as the cornerstone of auditing *only if it was inexpensive*; these experts seemed willing to sacrifice independence unless a cost-benefit analysis showed it was worthwhile. We argued that it made little sense to have non-independent outside audits – corporations could already do biased audits on their own. We might want to do a cost-benefit analysis on the value of audits to society, but external auditing without independence is not even a viable contender for a rational policy. While I am a fan of decision-analytic tools like cost-benefit analysis, this economic tool

was misapplied in the context of the auditor independence. Yet, it is quite consistent with the use of simple-minded economic tools in policy decision-making funded by special-interest groups (such as the auditing industry), whether these tools are relevant to the debate or not.

A second explanation for the SEC commissioners' decision focuses on their search for a "smoking gun" during the 2000 hearings. The commissioners asked many of its witnesses whether they knew of any audit that had been specifically corrupted as a result of conflicts of interest. Now, as I analyze this, it is important to note that I am not a lawyer. But, my assessment is that the lawyers who co-dominate Washington, along with economists, tend to use the criterion "beyond a shadow of a doubt" before changing a policy from the status quo, even though this criterion comes from the criminal side of the legal profession and is not legally relevant to civil or policy-setting matters. I argue that "beyond a shadow of a doubt" is a legal mental model that hinders wise policy making. Any reasoned analysis, whether by economists, psychologists, or behavioral decision researchers, would conclude that humans are influenced by conflicts of interest and often engage in self-serving behavior. A smoking gun is simply not needed to reach the conclusion that massive changes were, and still are, needed to create true auditor independence. (Notably, after the SEC failed to make meaningful change, the "smoking gun" appeared later in the year in a case regarding Waste Management and Arthur Andersen. By that time, the search had been called off by the Bush Administration and its first appointee to the SEC, Harvey Pitt.)

My third explanation for the SEC's decision is related to my second one: far too often, society too rigidly maintains the status quo (Bazerman et al., 2001). Before moving to a preferred policy from a deficient one, we demand too high a level of evidence. As a result, we stick with ineffective and inefficient policies for far too long. In addition, a small group of organizations or individuals typically cares deeply about avoiding change because the current situation is so profitable to them. In the case of auditor independence, a small number of accounting firms have benefited from allowing the corruption of audits, while the rest of society pays a price. As in so many issues, special-interest groups defend the status quo, while policymakers require an inappropriate standard before becoming willing to create important and necessary changes.

### **Parasitic Integration**

In late 2001, I was called by the FTC to serve as an expert witness in its case against pharmaceutical companies Schering-Plough and Upsher-Smith. Early that year, the FTC filed a lawsuit against Schering-Plough and Upsher-Smith, accusing them of restricting trade. Prior to this suit, Upsher-Smith had been preparing to introduce a generic pharmaceutical product that would threaten a near-monopoly held by Schering-Plough. In response, Schering-Plough sued

Upsher-Smith, accusing it of patent violation. The suit ended when the two companies reached a settlement in which Upsher-Smith agreed to wait a certain period of time before its entry into the market, and Schering-Plough agreed to pay Upsher-Smith \$60 million for five unrelated products.

My understanding of anti-trust law is that it is acceptable and legal for two companies to agree to a compromise period of delay for the generic to enter the marketplace in order to avoid the costs of a lawsuit over whether the generic could enter immediately, wait for the patent to expire, or any other decision made by the court. However, it is illegal for the monopolist to pay the generic entrant to stay out of the market or to pay the generic in any manner for a delay.

In its suit against the two companies, the FTC argued that Schering-Plough's \$60 million payment was not intended for Upsher-Smith's five products, but rather was a sham payment to keep Upsher-Smith's generic product off the market. The lawyers for the pharmaceutical firms argued that the value created by the deal was beneficial to society, and this view was supported by a well-recognized expert in dispute resolution, who broadly argued that value creation is good for society. In my testimony, I argued that value-creating deals were not necessarily good for society when the value created goes to two colluding firms at the expense of customers who would pay more for their medication as a result of the generic's delay in reaching the market. Furthermore, if such agreements were allowed, I argued that self-serving biases would lead colluding firms to justify sham payments – essentially creating a blueprint for how monopolists could pay competitors to keep their products off of the market. Focusing exclusively on value creation from the perspective of two colluding parties and ignoring the value lost to other parties is a perfect example of what Dolly Chugh and I call “bounded awareness,” or the tendency to systematically fail to see, seek, use, or share obviously relevant information (Bazerman and Chugh, 2006).

More interesting, while being deposed, I was asked if I had read the expert reports of the organizational economics expert witnesses for the pharmaceutical firms. I said that I had read four such reports. I was then asked about my assessment of these reports. While I was originally hired to offer a different view than the dispute resolution expert mentioned above, I had wandered onto the turf of the defendants' economists' testimony. Multiple experts for the pharmaceutical firms had argued that if Schering-Plough was risk averse, it may have conceded more in the negotiated settlement in terms of when Upsher-Smith could enter the market than the expected value that would have been obtained if Schering-Plough had followed through with its lawsuit against Upsher-Smith. That is, these experts argued that Schering-Plough may have conceded more than needed in order to avoid a lawsuit. If this was the case, then the negotiated agreement may have brought the generic to market faster than the expected value of a court decision, and was thus arguably pro-competitive.

When the defendant's lawyers asked me in the deposition about the testimony of the defendant's economists, I argued that standard economic tools could be used to show that this economic analysis was feasible. I went on to say that much of what we know empirically about risk behavior suggested that it was also extremely unlikely. First, for the logic of the economists to make sense, Schering-Plough needed to be relatively more risk averse than Upsher-Smith, not simply risk averse. Behavioral research suggests that the smaller firm (Upsher-Smith) was much more likely to be risk averse than the larger firm, which should rationally be very close to risk neutral (Bazerman, 2005). Finally, the economic testimony ignored one of the most important and powerful results to emerge from behavioral decision research: individuals and organizations are risk averse in the domain of gains, while risk seeking in the domain of losses. Schering-Plough was losing market share with the entry of the generic, while Upsher-Smith was gaining market share. The obvious conclusion is that Upsher-Smith was likely to be risk averse, while Schering-Plough, if it deviated from risk neutrality, was much more likely to deviate in the direction of risk-seeking behavior.

My intuition is that the administrative law judge digested a simplistic argument, however: that the defendant's economists said that risk aversion by Schering-Plough could explain the settlement, and that the FTC's witness (me) disagreed. I think that the judge simply ignored the weight of the empirical evidence against the testimony of the Schering-Plough economist. The judge ruled in favor of the firms and against the FTC, arguing primarily that the FTC had not produced evidence connecting the market delay to the \$60 million payment. The judge's decision suggested that he required the FTC to produce hard evidence demonstrating the intent to collude – a smoking gun. The FTC commissioners overruled the judge by a 5-0 vote, arguing that the competing firms would not have reached the two agreements independently. An appeals court later turned the decision around in favor of the pharmaceuticals, and the Supreme Court rejected the FTC's request for further review.

Of course, many other issues also influenced the decision of all three decision-making bodies. But my view is that the case was clear: the companies made a veiled attempt to skirt the law and create value for themselves, with no apparent concern for the harmful effects of their actions on consumers and, more broadly, society (Gillespie and Bazerman, 1997). James Gillespie and I coined the term *parasitic integration* to describe such instances in which the value created by negotiators is taken from parties who are not at the bargaining table. Such arrangements are parasitic because the value creation achieved by negotiators comes at the expense of others. It is my opinion that the administrative law judge and the appeals court provided a blueprint for parasitic integration and the legal restraint of trade among competitors in the future.



Why did Schering-Plough's feasibility argument on risk aversion succeed with the administrative law judge? As in my previous story, one possibility is that I ineffectively conveyed my arguments. Another option is that my arguments were too technical, beyond what society should expect a legally trained judge to understand. Another possibility has to do with the nature and status of the different social sciences in our society. Economists use formal theory (mathematics) to make their arguments, typically based on the assumption of rationality, while allowing people to have any preferences they like. For example, the economists in this case essentially asked whether it was *feasible* for rational actors to have created this agreement and for the deal to have been pro-competitive. Of course, it is feasible – it just isn't very likely. By contrast, in psychological and behavioral decision research, we make arguments based on empirical data and the likelihood of events occurring. My analysis remains that, given empirical data on how people actually make decisions, it was extremely unlikely that the deal between Schering-Plough and Upsher-Smith was anything other than anti-competitive.

This difference in the nature of evidence offered by economists versus psychologists and decision researchers is exacerbated by the different level of status that these professions hold in Washington policy setting. Economists are treated as practitioners of a well-established profession, while other social scientists are approached with skepticism. This state of affairs reflects the failure of social sciences other than economics to influence public policy in the past.

Finally, I believe that if the FTC had produced a smoking gun – such as an e-mail message that clearly showed the intent to collude to restrain trade – the judge in this case would have found the pharmaceutical firms guilty of collusion. But, as I argued earlier, since this was not a criminal trial and it was setting a precedent for the future, the empirical evidence should have carried more weight than it did in the judge's decision. "Smoking gun" evidence should not be required outside the criminal context.

### **Killing People through Bias**

My third Washington episode occurred in 2005, when the Department of Justice (DOJ) hired me to serve as an expert witness in its case against the tobacco industry. The case was filed under the Racketeer Influenced and Corrupt Organizations Act (RICO), which required the DOJ to prove: 1) that the defendants were guilty of fraud, 2) that the fraud was committed through a conspiracy, and 3) absent court intervention, the fraud would continue in the future. I was hired as a remedy witness—to advise the court on what remedies should be imposed on the defendants, *assuming* the DOJ had proven them liable. I was hired based on my writing on corporate governance based on the auditor independence work described earlier (Bazerman et al., 1997), a growing body of

papers on ethics in organizations (Messick and Bazerman, 1996; Moore et al., 2005), and, most importantly, my work with Mahzarin Banaji and Dolly Chugh and my knowledge of current research on implicit processes in decision making (Banaji et al., 2003).

Specifically, my understanding is that the DOJ hired me in part because current tobacco industry executives, while not admitting past guilt, argued that their organizations had changed dramatically. Even if the judge believed the defendants were guilty of past fraud, RICO required the DOJ to show that the misconduct would continue in the future. In my testimony, based on the assumption that liability had been proved, I argued that, absent significant court intervention to fundamentally change the way the tobacco companies were organized and rewarded, misconduct would continue in the future. I argued that as long as the desire to make a profit clashed with the desire to avoid misconduct, the human mind would engage in self-serving decisions; specifically, the tobacco companies would continue to mislead the public in order to engage in the frauds alleged by the DOJ (Babcock and Loewenstein, 1997). These frauds would include some combination of selling addictive substances while denying doing so, manipulating nicotine levels in cigarettes while denying doing so, leading the public to make the false inference that light/low tar products are less hazardous than “full-flavored” brands, denying the effects of second-hand smoke despite having data to the contrary, denying the primary health effects of smoking despite having internal studies that clarify the opposite of what is communicated to the public, making false claims about conducting independent research, and suppressing evidence on the adverse health effects of smoking. Essentially, my argument was that, in addition to the potential of the tobacco companies to intentionally mislead the public, the goals of the market system would motivate these companies to make self-serving interpretations of their decisions and behaviors, thereby allowing them to engage in misrepresentation beyond their own awareness (Banaji et al, 2003). My arguments sprung from the significant research in social psychology on the role of implicit processes as drivers of behaviors.

As part of my testimony, I also argued that other decision biases would affect the tobacco companies in ways that would encourage future misconduct. The tobacco companies were on record as claiming that evidence about the adverse health effects of second-hand tobacco smoke was inconclusive, just as they had argued about smoking decades earlier. I argued that when people and organizations take positions on a topic, they tend to seek confirmatory evidence to support their beliefs – for example, to look for data that creates ambiguity about the causal effects of smoking (Wason, 1960). I also argued that people tend to treat future, statistical victims with less concern than we treat identifiable victims; that is, our decisions and behaviors reflect far less concern about harming

unidentified people in the future than specific people who can be currently identified (Loewenstein and Small, 2007). Thus, part of what allows seemingly reasonable tobacco industry executives to engage in behaviors that will contribute to the death of hundreds of thousands of people each year (in the U.S. alone) is that the executives do not know who these people are. Finally, my testimony presented evidence of the human tendency to escalate commitment to a previous course of action (Staw, 1976). I argued that individuals and organizations have a strong tendency to continue past practices beyond the degree to which it is appropriate to do so.

My testimony concluded with the argument that, absent significant court intervention, tobacco industry executives would engage in misconduct in the future. My recommendation to the court, based on the assumption that the DOJ had proven liability, was that the court should appoint monitors to the tobacco companies to consider appropriate structural changes not limited to, but including, the removal of senior management.

As I write this paper in January 2007, Judge Gladys Kessler recently ruled against the tobacco industry but imposed penalties so minor that the real loser is society. Certainly, no major industry changes will result from this ruling. As with the other stories I have recounted, there are many unique aspects of this case, not the least of which is the accusation that Bush appointees intentionally sabotaged the government's own case against Big Tobacco<sup>1</sup>; however, these important complexities go beyond the focus of this paper. Thus, I can only speculate about the judge's [?] acceptance of the role of behavioral decision research in this case.

The first interesting issue regarding behavioral decision research in this case came in the form of a *Daubert* challenge. As I understand *Daubert*, the courts have created a set of rules to keep "junk science" out of the courtroom. Specifically, either side in a case can create a *Daubert* challenge on the basis that the evidence from the other side's expert witness does not constitute legitimate scientific input for the case. Federal Rule of Evidence 702 sets the following requirements governing the admissibility of expert testimony:

If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied

---

<sup>1</sup> See Common Dreams News Center for details on the role of the Bush appointees. Letter to H. Marshall Jarrett: Government Witness in Tobacco Case Says Justice Department Lawyers Asked Him to Weaken Testimony, June 20, 2005, <http://www.commondreams.org/cgi-bin/print.cgi?file=/news2005/0620-25.htm>.

the principles and methods reliably to the facts of the case (Tobacco on Trial, May 7, 2005).

As my day on the stand approached, the defendants moved to strike my testimony based on *Daubert*, arguing that behavioral decision research is not a legitimate area of scientific inquiry, that I was not an expert in behavioral decision research, and that the field of behavioral decision research did not speak to the facts in the case. It was unclear on which part of the challenge the defendants thought they had a chance of succeeding; presumably they thought they would strike on three fronts rather than one. I knew of the challenge, but thought it was not much more than an annoying legal maneuver. I also believed that the DOJ attorneys thought the *Daubert* challenge was without merit.

On Wednesday, May 4, 2005, I entered the courtroom. After the judge was seated, the lawyers on both sides started speaking in legalese about the *Daubert* issue regarding my testimony. The legalese ended when Judge Gladys Kessler stated skepticism about my testimony given *Daubert*: “I’ve read the testimony very carefully, and I think there are serious *Daubert* problems, but I’m going to admit it conditionally, of course subject to my final rulings on the *Daubert* issues.” I was stunned by the “serious *Daubert* problems,” but moments later I was on.

I found my day of testimony very difficult. The questions were tough, and I was not on my turf – I am not a regular as an expert witness. After many hours, my testimony was done. At the end of the day, the DOJ attorneys appeared pleased with my testimony. The press coverage of the day focused on Judge Kessler’s *Daubert* comment. After I had left the courtroom that day, May 4, the attorneys continued to argue about the *Daubert* issue. The day ended with Judge Kessler giving the defendants two days to provide a brief clarifying their *Daubert* challenge and telling the DOJ that they would then have the weekend to respond to the defendants’ brief. After receiving the defendants’ brief on Friday, May 6, Judge Kessler said that there was no need for the DOJ to file its brief the following Monday, as she concluded “Dr. Bazerman was eminently qualified to testify as an expert in ‘behavioral decision research,’ emphasizing his detailed methodology, his experience, and his scientific body of work. She said he has tested his theories, they have been subjected to peer review, and they are accepted in the scientific community” (Tobacco on Trial, May 10, 2005). Thus, I was certified as an expert on “behavioral decision research.”

Why did the defendants’ lawyers create a *Daubert* challenge? Obviously, in this multi-billion lawsuit, they seized every chance they could get to discredit the plaintiff’s witnesses. What about the judge’s initial skepticism about my testimony? Again, one possibility is that I am not really an expert in behavioral decision research. More likely (I hope), the *Daubert* challenge may have had more to do with the newness of behavioral decision research and with the fact that

no previous expert witness in a federal court had been certified specifically as an expert witness in behavioral decision research. Thus, despite the Nobel prizes (in Economics!) given to Simon and Kahneman, social sciences other than economics remain suspect in Washington. Dan Webb, a famous lawyer representing Phillip Morris in this case, repeatedly questioned my use of student subjects and laboratory studies, my lack of tobacco industry experience, etc. A Catch-22 has emerged in Washington: the relevance of social sciences other than economics to legal and policy matters is questioned, and the evidence for this questioning is the lack of prior use of these fields in legal and policy matters. Meanwhile, existing precedent supports the opinions of economists, which are often based on economic theory that uses the assumption of rational action — an assumption that has been thoroughly falsified by psychological and behavioral decision research!

A second challenge to my testimony was its focus on unintentional processes. Intent is a core part of the law. Can an organization engage in misconduct if it is not aware of its own misconduct? This issue, now answered affirmatively in the social psychology literature (Bazerman and Banaji, 2004), was critical to my testimony. I was arguing that structural changes to the tobacco industry should be considered, even if one believes the good intentions expressed by industry executives. While the psychological literature is now clear on this topic, from a legal perspective, the question is whether an individual or organization should be held responsible for unintentional misconduct. My view is that organizations must be responsible for the unintentional misconduct of their employees. Otherwise, without a smoking gun showing intention, it becomes too easy to justify any unethical behavior as the result of unintentional processes. We now know enough about unintentional processes that organizations should be required to take proactive steps to change their environments to reduce the likelihood of unintentional misconduct.

In the preceding paragraph, I returned to the notion of the smoking gun. Again, I do not believe that a smoking gun must be found to show that an institution is set up to encourage wrongdoing. In the tobacco case, the DOJ attorneys had identified plenty of smoking guns in the past. In the case, the DOJ had provided ample evidence of the frauds that they alleged by the tobacco industry. However, without admitting past wrongdoing, the tobacco industry argued that it had changed. My opinion is that clear data consistent with a pattern of wrongdoing by tobacco industry executives continues to this day (although, as an expert witness on remedies, I was asked to assume this rather than analyze the data). Should a smoking gun be required? Requiring a smoking gun means requiring evidence of intentionality. Should the burden of separating intentional versus unintentional wrongdoing lie with the plaintiff? I argue that we want organizations to fix structures that will encourage wrongdoing, regardless of

whether or not they result from intentionality. The smoking gun requirement works against this argument.

Finally, the DOJ case against Big Tobacco was based on the claim that a pattern of fraud continues to this day. It is clear that the DOJ was not focused on penalizing the tobacco companies, but had the forward-looking goal of changing the way the industry does business in the future in order to save hundreds of thousands of lives annually in this country alone. However, moving organizations away from the status quo and persuading courts or regulatory bodies to change how organizations operate is tough work. Too often, we start with the existing system and make insufficient adjustments in our efforts to create a better society. The judicial decision in the tobacco case is a trivial step in the direction of more beneficial societal outcomes when major steps are called for. Too often, when it comes to public policy, the status quo either prevails or inappropriately influences the future.

## **Conclusions**

There is little doubt that the field of economics has had a much greater influence on government policy in Washington and in other world capitals than have the other social sciences (Bazerman and Malhotra, 2006). In terms of influence, the economists have won. Unfortunately, government policies have led to millions of jobs and tens of millions of retirement plans being lost to accounting scandals, the commercial extinction of the majority of the world's large fisheries, the needless deaths of thousands of Americans each year because of the stupidity of the U.S. organ donation system, and numerous other inefficiencies (Bazerman and Malhotra, 2006). Economic logic lies behind each of these disasters, without the input needed from other informative social sciences. The stories in this article extend this argument to claim that the failure of courts and policymakers to be informed about other social sciences (in this case, behavioral decision research) leads to the corruption of policy-formulation process and low-quality outcomes for society.

Creating wise policies in society requires us to incorporate a modern understanding of unconscious or unintentional processes in decision making. For far too long, the unconscious has been associated with psychological perspectives that have not stood up well to empirical testing (e.g., Freudian psychology). Currently, a very different approach to understanding the human mind has been developed by rigorous scientists, who have confirmed the importance of unconscious or unintentional processes (Banaji et al., 2004). Leaders must consider how the institutions that they create affect both intentional and unintentional bases of misconduct. Without such attention to these forces, it is far too easy to accept the institutions that drive unethical behavior despite the absence of what is traditionally viewed as an unethical act.

When creating policy, we need to apply sound social science logic and use the best empirical data to assess what is likely to occur under different policies. Far too often, we accept the status quo (Baron, 1998), particularly if economic theory (lacking data) can show that it is feasible that the status quo is acceptable. In policy-making domains, this feasibility test should be replaced with the broader question of where the preponderance of the evidence lies. Furthermore, this evidence should come from a variety of social sciences. We should give the current state of a policy issue far less weight, as it is clear that enormous inefficiencies exist in so many current policies (Bazerman et al., 2001; Baron).

In each of the three stories in this paper, I believe that government decision-makers overweighed a simplistic version of economic theory. In the auditor story, the SEC misapplied the logic of cost-benefit analysis and failed to make the appropriate changes needed to create auditor independence. In the antitrust story, the pharmaceutical firms attempted to justify their behavior by showing that economic theory could be contorted to explain their deal in a manner that did not restrain trade. Finally, in the tobacco story, the prevailing belief in pure economic theory was used to mount a *Daubert* challenge to the use of behavioral decision research. Ample evidence suggests that economic theory plays a central role in the policy-formulation process. It is unfortunate that it does so to the exclusion of useful information from other social sciences.

Milton Friedman argued that unrealistic assumptions in economic theory do not matter as long as economic theory predicts behavior, and that economic theory does a pretty good job of predicting behavior (Friedman, 1953). The problem is that other social sciences have advanced to the extent that we now know of systematic patterns when we can adjust economic theory to make better predictions, yet decision-makers are not using this knowledge from other social sciences sufficiently. Economists too often counter that their theory has rigor (i.e., it is formalized) and explains all behavior, as compared to other social sciences that have diverse theories for different contexts (Ferraro et al., 2006). In the perceived battle between economics and the other social sciences, it often appears that economics wins. Yet when harder physical scientists look at economics, they typically are deeply critical of the illogic of building formalizations on faulty assumptions (Beinhocker, 2006).

The debate about the appropriateness of using different theories should depend on our purpose. If our goal is the scientific pursuit of a single theory to explain all human behavior, economic theory and evolutionary theory are doing pretty well. If our goal is to make specific predictions in specific contexts, we know of many contexts in which behavioral decision research and other social sciences regularly outperform economic theory. And if we want to create optimal public policy, we clearly need to combine economic theory with useful insights from many other fields.

## References

- Antle, R. Auditor independence. Journal of Accounting Research, 22: 1–20, 1984.
- Babcock, L., & Loewenstein, G. Explaining Bargaining Impasse: The Role of Self-Serving Biases. The Journal of Economic Perspectives, 1997, 11(1), 109-126.
- Banaji, M.R., Bazerman, M.H., & Chugh, D. How (Un)ethical are you? Harvard Business Review, December, 2003.
- Banaji, M.R., Nosek, B.A., & Greenwald, A.G. No place for nostalgia in science: A response to Arkes and Tetlock. Psychological Inquiry, 2004, 15, 279-310.
- Baron, J. Judgment misguided: Intuition and error in public decision making. Oxford: Oxford University Press, 1998.
- Bazerman, M.H. Climate Change as a Predictable Surprise, Climatic Change, 2006, 1-15.
- : Conducting Influential Research: The Need for Prescriptive Implications. Academy of Management Review, 2005, 30:25-31.
- Bazerman, M.H. & Banaji M. (Eds.) Special issue of Social Justice Research on The Social Psychology of Ordinary Unethical Behavior, 2004, 17.
- Bazerman, M.H., Baron, J., and Shonk, K. You Can't Enlarge the Pie: Six Barriers to Effective Government, Basic Books, 2001.
- Bazerman, M.H., & Chugh, D. Decisions without Blinders. Harvard Business Review, January, 2006.
- Bazerman, M.H., Loewenstein, G, & Moore, D.A. Why Good Accountants Do Bad Audits. Harvard Business Review, November, 2002.
- Bazerman, Max H., & Malhotra, D. Economics Wins, Psychology Loses, and Society Pays. In D.D. Cremer, J. K. Murnighan, and M. Zeelenberg (Eds.), Social Psychology and Economics, 263-280, Mahwah, N.J.: Lawrence Erlbaum Associates, 2006.



Bazerman, M.H., Moore, D.A., Tetlock, P.E., & Tanlu, L. Reports of solving the conflicts of interest in auditing are highly exaggerated. Academy of Management Review, 2006, 31(1), 1-7.

Bazerman, M.H., Morgan, K., & Loewenstein, G.F. The Impossibility of Auditor Independence. Sloan Management Review, Summer, 1997.

Bazerman, M.H., & Watkins, M. Predictable Surprises, Boston, MA: Harvard Business School Press, 2004.

Beinhocker, E.D. The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics. Boston, MA: Harvard Business School Press, 2006.

Cain, D., Moore, D.A., & Loewenstein, G. The dirt on coming clean: Perverse effects of disclosing conflicts of interest. Journal of Legal Studies, 2005, 34, 1-25.

Epley, N., Caruso, E., & Bazerman, M.H. When Perspective Taking Increases Taking: Reactive Egoism in Social Interaction. Journal of Personality and Social Psychology, 2006, 91(5), 872-889.

Ferraro, F., Pfeffer, J., & Sutton, R. I. Economics language and assumptions: How theories can become self-fulfilling. Academy of Management Review, 2006.

Friedman, M. Essays in Positive Economics. Chicago: University of Chicago Press, 1953.

Gillespie, J., & Bazerman, M.H. Parasitic Integration, Negotiation Journal, 1997, 13, 271-282.

Kahneman, D., & Tversky, A. Prospect Theory: An Analysis of Decision Under Risk, Econometrica, 1979, 47(2), 262-292.

Loewenstein, G., Moore, D. A., & Bazerman, M. H. Enron failures shows U.S. auditing system is in dire need of big change. Pittsburgh Post-Gazette, January 15, 2002, p. 11-C.

Loewenstein, G., & Small, D. The scarecrow and the tin man: The Vicissitudes of Human Sympathy and Caring, Review of General Psychology, 2007, forthcoming

- March, J., & Simon, H. Organizations. Chapter 6, New York: Wiley, 1958.
- Messick, D.M., & Bazerman, M.H. Ethics for the 21st Century: A Decision Making Approach. Sloan Management Review, 1996, 37, 9-22; Moore, D., Cain, D.,
- Moore, D., Cain, D., Loewenstein, G., & Bazerman, M.H. Conflicts of Interest: Problems and Solutions from Law, Medicine, and Organizational Settings. London: Cambridge University Press, 2005.
- Moore, D., Tetlock, P., Tanlu, L., & Bazerman, M.H. Conflicts of interest and the case of auditor independence: Moral seduction and strategic issue cycling. Academy of Management Review, 2006, 31(1), 1-20.
- Nelson, M.W. Ameliorating Conflicts of Interest in Auditing Effects of Recent Reforms and Auditors and Their Clients. Academy of Management Review, 2006, 31(1), 30-42.
- Ross, M., & Sicoly, F. Egocentric biases in availability and attribution. Journal of Personality and Social Psychology, 1979, 37, 322–336.
- Simon, H.A. Models of Man: Social and Rational. New York: John Wiley and Sons, Inc., 1957.
- Staw, B.M. ‘Knee deep in the big muddy: a study of escalating commitment to a chosen course of action’. Organizational Behavior and Human Performance, 1976, 16, 27-44;
- Tobacco on Trial: Blogging U.S. vs. Phillip Morris, Inc. MON: Kessler on Bazerman/Daubert, May 10, 2005, <http://www.tobacco-on-trial.com/2005/05/page/2/>. Accessed on January 5, 2007.
- Tobacco on Trial: Blogging U.S. vs. Phillip Morris, Inc. ORDER 943: Kessler Rules Bazerman Testimony Admissible under Daubert, May 7, 2005, <http://www.tobacco-on-trial.com/2005/05/page/2/>, Accessed on January 5, 2007.
- Tversky, A., & Kahneman, D. Judgment under uncertainty: Heuristics and biases. Science, 1974, 185(4157), 1124-1131;
- Wason, P. C. On failure to eliminate hypotheses in a conceptual task. Quarterly Journal of Experimental Psychology, 1960, 12, 129-140.