

## The Limits of Transparency: Pitfalls and Potential of Disclosing Conflicts of Interest

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A conflict of interest of the type discussed here occurs when one's professional responsibilities conflict with one's personal interests, which are often material but could also involve other goals, such as power or status. Conflicts of interest have been at the heart of many recent economic crises. For example, the sudden demise of high-flying corporations such as Enron and WorldCom has been attributed, at least in part, to the fact that accounting firms auditing those corporations were also providing lucrative consulting services that could have been jeopardized by an unfavorable audit. In the recent mortgage crisis, credit-rating agencies that evaluated the mortgage-backed securities were hired and fired by firms whose bonds they were rating—a situation that still exists in auditing. In the dot-com bubble, firms that were underwriting IPOs were also giving investment advice to their retail clients. Further, the dramatic increases in health-care costs in the United States over past decades have been fueled in part by conflicts of interest, including payments from medical device and pharmaceutical companies to physicians and fee-for-service remuneration schemes (Jerome P. Kassirer 2005).

There have been many policy efforts to deal with conflicts of interest—including regulatory interventions that led to the separation of auditing and consulting functions at accounting firms—as well as legislative initiatives, including large parts of the Sarbanes–Oxley Act and the Financial Reform Bill of 2010. Across the diversity of policy interventions, however, there is one striking constant: the ubiquity of disclosure. Virtually all policies intended to mitigate the negative effects of conflicts of interest—

whether in business, government, media, or academia—include, or are limited to, disclosure.

In a world of perfectly rational and informed advisors and advisees, disclosure would probably be an effective remedy for conflicts of interest (see, e.g., Vincent P. Crawford and Sobel 1982). In principle, disclosure should allow the recipient of advice to discount that advice. Anticipating such a reaction, advisors who want their advice to be valued should be motivated to steer clear of conflicts of interest or provide credible assurances that conflicts have been professionally managed. In fact, prior research on public information disclosure in contexts such as health and safety warnings has generally found that beneficial effects (when they occur) are more likely to result from the behavior of the *targets* rather than of the *recipients* of disclosures (Archon Fung, Mary Graham, and David Weil 2007).

However, there are also many reasons that disclosure can have unintended consequences, some of which involve errors people make in responding to the disclosed information, and others that involve reactions of advisors upon disclosure of their extraprofessional interests. These psychological factors are described in the first section of this paper, and have been the focus of our research on the impact of disclosure. We outline our experimental studies in Section II, and suggest ways to enhance the effectiveness of disclosure policies in Section III.

### I. How Disclosure Can Backfire

#### A. Impact of Disclosure on Advisors

There are two major psychological mechanisms through which disclosure can influence conflicted advisors. *Strategic exaggeration* is the tendency of advisors to inflate the bias in their advice to counteract any discounting that might occur because of disclosure. Perhaps strategic exaggeration does not make much logical sense, especially if we posit no self-restraint in the

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advice-giver: if the advice-giver could increase his or her payoff by giving more biased advice, why not do so maximally, even in the absence of disclosure? Perfect rationality aside, however, one can easily imagine a doctor compensating for anticipated discounting caused by disclosure by “playing up” the benefits of a new drug.

*Moral licensing* refers to the undermining of professionalism that can occur as a result of disclosure. Although prior research has shown that the introduction of a subsidy or fine can undermine nonmaterial (e.g., altruistic or egoistic) motives (Roland Bénabou and Jean Tirole 2006), disclosing a conflict of interest can likewise undermine the advisor’s motivation to adhere to professional standards. Experimental research suggests that after engaging in moral behavior people feel “licensed” to act immorally in subsequent interactions (Benoit Monin and Dale T. Miller 2001). Disclosure also introduces a possible rationalization for unethical behavior: a person who has received disclosure should, perhaps, “expect” bias—*caveat emptor*.

### B. Impact of Disclosure on Advice Recipients

Psychological research offers similar grounds for pessimism when it comes to advisees’ discounting of advice following disclosure of a conflict of interest. First, research on judgment suggests that advisees are likely to “anchor” on the advice they receive and then adjust (i.e., discount) insufficiently, even though they know the advice may be biased (Amos Tversky and Daniel Kahneman 1974).

Second, most research on disclosure of conflicts of interest suggests that advice recipients are not very concerned about the information they receive (e.g., Lisa Bero, Stanton Glantz, and Mi-Kyung Hong 2005; Christine Grady et al. 2006). Thus, for example, one study (Lindsay A. Hampson et al., 2006) found that “more than 90 percent of patients expressed little or no worry about financial ties that researchers or institutions might have with drug companies.” Indeed, disclosure can lead to an *increase* rather than a decrease in trust if the disclosure is interpreted as a sign of honesty or if the fact that the advisor is receiving payments is interpreted as an indication of professional standing (Steven D. Pearson, Ken Kleinman, and Donna Rusinak 2006).

Third, discounting advice appropriately for a disclosed conflict of interest requires a mental

model of advisor behavior to predict the impact of the conflict—let alone the disclosure of that conflict—on the advice. Lacking such a model, advice recipients will not know what to do with the disclosed information, and, as a result, may simply ignore it.

Finally, as we describe below, disclosure can create a “burden of disclosure” effect whereby advice recipients who learn of an advisor’s conflict do become less trustful of advice, yet feel more pressured to follow that advice. In the absence of disclosure, for example, a patient’s rejection of participation in a drug trial would likely be attributed to risk aversion or satisfaction with a currently used drug. The same rejection, following disclosure of a conflict, might be attributed to the patient’s distrust of the doctor—an implicit insinuation of corruption—which a patient is likely to be reluctant to communicate.

## II. Experimental Studies of Disclosure

### A. Increased Bias with Disclosure

In two papers, Cain, Loewenstein, and Don A. Moore (2005, 2011) examined the impact of disclosing an experimental facsimile of a conflict of interest. The first paper (2005) examined disclosure in an experimental setup in which “estimators” guessed the value of a jar of coins and were paid according to the accuracy of their estimates. “Advisors” were given better information for evaluating coin-jar values and then conveyed suggested valuations to the estimators. In the no-conflict condition, advisors’ incentives were aligned with those of the estimators; they were paid whatever their estimator was paid. In the two conflict conditions, however, advisors were paid only to the extent that estimators *overestimated* the value of the coins. In the disclosed-conflict condition, the misalignment of incentives was conveyed to estimators via handwritten disclosures that came with the advice. In the undisclosed-conflict condition the misalignment of incentives was not communicated.

The central results of the study, consistent with psychological mechanisms discussed above, were that advisors exaggerated more when the misalignment of incentives was disclosed, and estimators did not discount sufficiently to compensate for this greater exaggeration. Hence, advisors ended up with higher payoffs with disclosure than without, and estimators ended up

with lower payoffs—exactly the opposite of the intended effect of disclosure.

The second paper (2011) presented an economic model of the dynamics involved and, in the main study, used a more naturalistic situation somewhat akin to the interactions between a prospective home buyer and a conflicted real estate agent (who would benefit from a homebuyer's high valuation). Estimators in the study attempted to guess the actual selling prices of houses in Pittsburgh, and were given advice by advisors who had much better information, including prices of comparable houses in the neighborhood and the houses' tax-assessed values. Four experimental conditions varied whether or not there was a conflict (i.e., whether the advisor gained by the estimator giving a high or accurate estimate) and whether or not the advisor's incentives were disclosed. Results of this study were strikingly parallel to those of the coin-jar study; again, estimators earned less when the conflict was disclosed than when it was not.

Two other studies in the second paper (2011) tested the specific psychological mechanisms for how disclosure might bias advice. The first study examined strategic exaggeration and found that while many advisors who changed their advice following disclosure gave more biased advice (consistent with strategic exaggeration), another, albeit smaller, group exhibited what could be called *strategic restraint*; they reined in the bias of their advice, anticipating that advisees informed of the conflict would discount advice if it was too obviously exaggerated. The second follow-up study, in contrast, produced strong evidence in support of moral licensing; participants judged it as less unethical to offer biased advice with the intention of misleading advisees if the advice was preceded by disclosure.

### B. *The Burden of Disclosure*

In a series of studies (Sah, Loewenstein, and Cain 2010), again involving interactions between advisors and advice recipients, we explored the burden of disclosure—the distrust of advice coupled with increased pressure to comply with it—as a result of disclosure. The first mechanism behind such increased compliance is what we call *insinuation anxiety*; advice recipients experience greater discomfort turning

down advisors' recommendations when a conflict has been disclosed because they fear the rejection will signal the belief that the conflict of interest has corrupted the advisor. We call the second mechanism the *panhandler effect*; consistent with the literature on "reluctant altruism" (e.g., Jason D. Dana, Cain, and Robyn M. Dawes 2006), advice recipients may feel increased pressure to help an advisor satisfy his or her personal interests once these interests become common knowledge.

In experiments with real payoffs, advisors advised "choosers" whether to choose "die-roll A" or "die-roll B," each of which would result in a different, specified set of prizes (e.g., a \$5 Starbucks gift card if a "5" was rolled on die B). Die-roll A was superior to die-roll B, as it had more than twice the expected value, and pilot tests revealed that approximately 92 percent of participants preferred it over die-roll B. Advisors gave choosers a communication form that contained information about the prizes associated with both die-rolls and also gave a recommendation about which die-roll the choosers should pick. Some advisors were subject to a conflict of interest; they were informed that they, too, would get a die-roll of their choice if the choosers picked die-roll B (the inferior choice). If the choosers picked die-roll A, the advisors would receive nothing. Of these conflicted advisors, half were required to disclose their conflict of interest to the choosers by writing out a word-for-word disclosure statement on the communication form. Other conflicted advisors were told *not* to disclose their self-interest to the choosers. In addition, there was a no-conflict condition in which advisors were not subject to a conflict of interest and were rewarded regardless of the die-roll the choosers picked.

Not surprisingly, nearly all unconflicted advisors recommended die-roll A (93 percent), and all choosers who received this recommendation complied without feeling increased pressure. Of those choosers who received bad advice from their conflicted advisors (i.e., a recommendation to pick die-roll B), 52 percent complied with this recommendation in the no-disclosure condition, but this number *increased* to 81 percent with disclosure. After making their choice of die-roll, but before rolling for their prize, choosers answered a series of questions regarding how they felt about their choice and the advice they received. Choosers who received disclosure

statements reported that they trusted the advice less and were also significantly less pleased about their choice with disclosure; but they also indicated that they felt significantly more pressure to help their advisors and also felt that it would be considerably more uncomfortable to turn down their advisors' recommendation. Disclosure, therefore, increased the pressure to comply with bad advice.

In a follow-up study, we found that this pressure on choosers to help advisors was motivated not by pure concern for the advisors' welfare but rather by reluctance to appear unwilling to help the advisors once the advisors' interests were publicly disclosed. We found that the burden of disclosure was significantly reduced (i.e., that choosers were far less likely to follow advisors' bad recommendations) when the disclosure was provided secretly by an external source rather than directly from the advisor, suggesting that it is the *common knowledge* of the disclosed interests—not merely the advice-recipient's knowledge of those interests—that creates pressure to satisfy them.

In a final role-playing scenario (rather than incentive-compatible lab study), we had participants play the role of hypothetical patients and first read about their medical history and current symptoms. Each participant then listened to a voice recording of their "doctor," who identified two treatment options to the patient and recommended one of these options (the one most benefiting the doctor). The manipulation between the two main conditions was that, in the disclosure condition, the doctor disclosed that he would gain financially if the patient chose the recommended treatment option, while in the no-disclosure condition, no extra information was given to the patient. Despite the advice being exactly the same in both conditions, the patients reported trusting the doctor significantly less with disclosure, were less likely to believe that their doctor had their best interests at heart, and were less likely to indicate that they would consult with that particular doctor again in the future—even though it was unclear whether the advice was best for them as patients. Disclosure had damaged the doctor-patient relationship. It could be argued that decreased trust is the intended purpose of disclosure. However, the patients who heard the disclosure statement from their doctor also reported that they would feel

significantly more uncomfortable turning down the doctor's recommendation for fear of insinuating that the doctor was corrupt. Disclosure created a significant burden on the patient through these conflicting forces.

### III. Enhancing the Beneficial Impact of Disclosure

Research has identified a number of factors that determine whether product safety disclosures have intended or unintended consequences (see Fung, Graham, and Weil 2007). Our own research has likewise identified variables that are key in determining whether disclosing a conflict of interest has beneficial or detrimental effects. Cain, Loewenstein, and Moore (2011, study 4) identified one such factor, finding that people took a single piece of conflicted advice pretty much at face value, disclosure or no disclosure, discounting only minimally. However, when given advice from two advisors, one conflicted and the other not, they put less weight on the conflicted advice. This suggests that disclosure may be more effective when conflicted advice is contrasted with unconflicted advice (see, also, Christopher Robertson 2010); however, an in-depth analysis of the results indicated that conditions needed to be near perfect for advice recipients to properly weigh a second opinion. Disclosure seemed to work only when four ingredients came together: (i) the unbiased advice was disclosed as unbiased, (ii) the biased advice was disclosed as coming from a conflicted source, (iii) the conflicted advice was clearly biased, and (iv) both pieces of advice were offered simultaneously.

In a series of follow-ups to the die-roll studies (Sah, Loewenstein, and Cain 2010), we also examined different remedies for the burden-of-disclosure effect. We found that choosers were less likely to follow the advisors' bad advice when there was a "cooling-off" period between getting the advice and choosing, or when choosers made their decisions in private rather than in front of their advisors. Applied to medicine, these results suggest that patients should not be asked to make some decisions (e.g., whether to enroll in a clinical trial) until they have had time to think about it at home, away from the pressure of the doctor's presence.

Other research has examined different interventions that could make disclosure more

effective. Bryan K. Church and Xi Kuang's (2009) research suggests that the ability to sanction biased advisors may help improve disclosure's efficacy. Christopher Koch and Carsten Schmidt's (2009) study suggests that many rounds of feedback may serve to educate advice recipients on how to properly react to disclosure. However, neither of these approaches seems practical in most real-world situations in which bias is difficult to identify and in which opportunities for learning from experience are limited. For now, and especially for the inexperienced and vulnerable, disclosure does not appear to live up to its protective promises.

#### IV. Conclusion

These results contribute to a growing array of research that compares the effect of information provision to other (often more substantive) policy interventions in situations in which individuals are prone to make mistakes by imposing "internalities" on themselves (Richard J. Herrnstein et al. 1993). In the realm of diet, for example, disclosure of nutritional information, taxes and subsidies, and "nudges" that make healthful food choices more convenient are all options for policies designed to promote consumption of healthful foods. Much of this research in other domains reaches similar conclusions to those discussed here; more information, in general, is not very effective in improving decisions. People deserve accurate information with which to make informed decisions, so disclosure is inherently desirable. However, whether (and to what extent) information actually improves economic outcomes depends critically on *what* information is delivered, *how* it is delivered, and *how* it is utilized by receivers. While disclosure has manifest pitfalls, there are also enormous opportunities for designing policies that will enhance its benefits. Care must be taken, however, to ensure that disclosure does not replace more effective measures, such as working harder to eliminate conflicts of interest in the first place.

#### REFERENCES

- Bénabou, Roland, and Jean Tirole. 2006. "Incentives and Prosocial Behavior." *American Economic Review*, 96(5): 1652–78.
- Bero, Lisa, Stanton Glantz, and Mi-Kyung Hong. 2005. "The Limits of Competing Interest Disclosures." *Tobacco Control*, 14: 118–26.
- Cain, Daylian M., George Loewenstein, and Don A. Moore. 2005. "The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest." *Journal of Legal Studies*, 34(1): 1–25.
- Cain, Daylian M., George Loewenstein, and Don A. Moore. 2011. "When Sunlight Fails to Disinfect: Understanding the Perverse Effects of Disclosing Conflicts of Interest." *Journal of Consumer Research*, 37(5).
- Church, Bryan K., and Xi Kuang. 2009. "Conflicts of Interest, Disclosure, and (Costly) Sanctions: Experimental Evidence." *Journal of Legal Studies*, 38(2): 505–32.
- Crawford, Vincent P., and Joel Sobel. 1982. "Strategic Information Transmission." *Econometrica*, 50(6): 1431–51.
- Dana, Jason D., Daylian M. Cain, and Robyn M. Dawes. 2006. "What You Don't Know Won't Hurt Me: Costly (But Quiet) Exit in Dictator Games." *Organizational Behavior and Human Decision Processes*, 100(2): 193–201.
- Fung, Archon, Mary Graham, and David Weil. 2007. *Full Disclosure: The Perils and Promise of Transparency*. Cambridge: Cambridge University Press.
- Grady, Christine, Elizabeth Horstmann, Jeffrey S. Sussman, and Sandra Chandros Hull. 2006. "The Limits of Disclosure: What Research Subjects Want to Know about Investigator Financial Interests." *Journal of Law, Medicine and Ethics*, 34(3): 592–99.
- Hampson, Lindsay A., Manish Agrawal, Steven Joffe, Cary P. Gross, Joel Verter, and Ezekiel J. Emanuel. 2006. "Patients' Views on Financial Conflicts of Interest in Cancer Research Trials." *New England Journal of Medicine*, 355: 2330–37.
- Herrnstein, Richard J., George F. Loewenstein, Drazen Prelec, and William Vaughan Jr. 1993. "Utility Maximization and Melioration: Internalities in Individual Choice." *Journal of Behavioral Decision Making*, (6)3: 149–85.
- Kassirer, Jerome P. 2005. "Physicians' Financial Ties with the Pharmaceutical Industry: A Critical Element of a Formidable Marketing Network." In *Conflicts of Interest: Challenges and Solutions in Business, Law, Medicine, and Public Policy*, ed. Don A. Moore, Daylian M. Cain, George Loewenstein, and Max

- H. Bazerman, 133–41. Cambridge: Cambridge University Press.
- Koch, Christopher, and Carsten Schmidt.** 2009. “Disclosing Conflict of Interest—Does Experience and Reputation Matter?” *Accounting, Organizations, and Society*, 35(1): 95–107.
- Monin, Benoit, and Dale T. Miller.** 2001. “Moral Credentials and the Expression of Prejudice.” *Journal of Personality and Social Psychology*, 81(1): 33–43.
- Pearson, Steven D., Ken Kleinman, and Donna Rusinak.** 2006. “A Trial of Disclosing Physicians’ Financial Incentives to Patients.” *Archives of Internal Medicine*, 166: 623–28.
- Robertson, Christopher.** 2010. “Blind Expertise.” *New York University Law Review*, 85: 174–257.
- Sah, Sunita, George Loewenstein, and Daylian M. Cain.** 2010. “The Burden of Disclosure.” [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1615025](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1615025).
- Tversky, Amos, and Daniel Kahneman.** 1974. “Judgment under Uncertainty: Heuristics and Biases.” *Science*, 185(4157): 1124–31.

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