

**THE DIRT ON COMING CLEAN:  
THE PERVERSE EFFECTS OF DISCLOSING CONFLICTS OF INTEREST**

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Dedication:

This dissertation is dedicated to Herb Simon, a Carnegie Mellon luminary who I just missed meeting, but whose ideas I encountered both as a philosopher and as a social scientist. I wish I had come to Carnegie Mellon just a bit earlier. I was honored to be present when George Loewenstein won the Herb Simon University Chair, with Herb's family and students applauding.

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## ABSTRACT

Conflicts of interest often cause experts to offer advice that is unintentionally biased and/or intentionally corrupt. Although disclosure is frequently proposed as the first response to problems created by conflicts of interest, this research suggests many ways that disclosure may fail or make matters worse. For example, (1) even information disclosed as completely useless can have lasting impact on those receiving it. (2) When advisors think that a disclosure will warn an audience to discount the advice given—thereby threatening to reduce the revenue that advisors expect to generate from their advice—advisors may exaggerate their advice to counteract subsequent discounting and thereby protect the revenue that would otherwise be lost. (3) Disclosure can morally license advisors to offer increasingly self-serving advice, because they feel that "the audience has been warned." The upshot (of 1-3) is that while disclosure may (insufficiently) warn an audience to "cover its ears," it might also encourage advisors to "yell even louder." And, because the (potentially worse) advice still impacts the audience's judgments, disclosure can leave the audience worse off for being warned. (4) People often feel compelled to satisfy other's interests, especially when these interests are common knowledge (e.g., as seen during anonymous giving in economic games); so, an advisor who discloses a personal interest may thereby pressure *audiences* to satisfy the advisor's interest at the audiences' own expense. This all suggests that disclosure may help those who already have an informational advantage and may hurt those it was intended to protect, namely, the consumers of information and advice. (5) And finally, where disclosure might work, requiring it can motivate advisors to avoid the technical conditions that require disclosure, even when such circumvention is costly.

This dissertation showcases disclosure's many shortcomings, examines some of the underlying psychological processes involved, and suggests which organizational contexts might alleviate or exacerbate these problems. In doing so, this dissertation sheds light on conflicts of interest, information exchange, self-restraint, and other-regarding preferences more generally.

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## CHAPTER I INTRODUCTION

It has become a truism on Wall Street that conflicts of interest are unavoidable. In fact, most of them only seem so, because avoiding them makes it harder to get rich. That's why full disclosure is suddenly so popular: it requires no substantive change....Transparency is well and good, but accuracy and objectivity are even better. Wall Street doesn't have to keep confessing its sins. It just has to stop committing them (James Surowiecki, 2002).

Imagine that your financial advisor tells you to invest heavily in a particular stock. She also discloses that her employer owns significant shares of the firm that issues her recommended stock, but she quickly tries to reassure you that the stock is a prime candidate for satisfying your investment needs. Now, given that your advisor has just disclosed that she may have a conflict of interest in recommending the stock, how does this disclosure influence your decision? How might your advisor's ties to the stock have affected her recommendation? And how might the disclosure *itself* have affected anything else that your advisor told you (or did not tell you)? To what extent should you ignore what you have been told? How much does your advisor really care about you? And, even *if* your advisor has only your best interests at heart, might the disclosure cause her to exaggerate the potential upside of the stock in order to counteract the disclosure's anticipated warning effect? Or, is it possible that your advisor may feel less responsible for you now that "you have been warned"? What will your advisor think if you go

against her advice? What should you think? These are the questions that this dissertation will try to answer.

A conflict of interest occurs when an individual's professional responsibilities diverge from his or her personal interests (or when different professional responsibilities clash). There are many economic and social situations in which people must rely on advice from experts who face such conflicts. For example, an auto mechanic may recommend costly repairs; a physician may recommend expensive tests or procedures; a realtor may warn that a particular property is in great demand. This sort of advice ought to be taken with some skepticism because, although it may be informative and may be given in good faith, it may also be unintentionally biased or intentionally misleading. Such issues are common among professionals, and many professional associations have struggled to balance their members' interest in self-enrichment against a responsibility to serve their clients. Often, these conflicts have been regulated by each industry's own norms and standards, but conflicts of interest have occasionally produced problems so costly that lawmakers have seen fit to intervene. While there has always been uncertainty about the most effective policies for dealing with the problems created by conflicts of interest, often the first—or only—solution that is implemented involves disclosure. In this dissertation, however, I will argue that disclosure can fail to solve the problems caused by conflicts of interest and that it may even make matters worse. In this chapter, I will consider a few of the more spectacular market failures brought about by conflicts of interest and how disclosure was implemented in each situation. Then, I will outline how disclosure is supposed to work, and I will outline a few of the many ways disclosure can fail and even have perverse effects (as detailed in subsequent

chapters). In my concluding chapter, I will suggest several reasons why disclosure remains so popular, despite its many shortcomings.

## **Scandals**

In 2001, the Enron Corporation was forced to declare bankruptcy after it revealed that its public financial reports had overstated profits by hundreds of millions of dollars—errors that Enron’s auditor, Arthur Andersen, failed to correct or expose. Although it was then the largest bankruptcy in U.S. history, the events at Enron were followed in quick succession by scandals at Adelphia, AOL Time Warner, Bristol-Myers Squibb, Global Crossing, Halliburton, Mirant Energy, Qwest, Rocky Mountain Electric, Tyco, Xerox, Shell Oil, and the even larger bankruptcy of WorldCom. Although the specifics of each of these scandals differed, there is at least one common element: in each case, the company’s auditors were subject to conflicts of interest (Nelson, 2005). Perhaps the most significant source of such conflicts was the practice of providing both auditing and consulting services to the same client (Levitt & Dwyer, 2002). By 2000, consulting revenues exceeded those from auditing at many accounting firms.

In 2000, the U.S. Securities and Exchange Commission (SEC) was concerned enough about these actual and perceived conflicts of interest that it implemented a series of new rules and regulations. Predictably, these gave a prominent role to disclosure. In fact, most responses to conflicts of interest (for a review, see Stark, 2000; Moore, Cain, Loewenstein, & Bazerman, 2005) include regulation requiring that conflicts of interest be disclosed. Audit firms were required to reveal how much they were paid by the client firm and what services were provided in return. The Sarbanes-Oxley Act of 2002 (see: NYSE, 2002) was written in response to the accounting scandals and dedicated an entire section (Title IV) to increased disclosure



requirements of various types. And the SEC now goes so far as to prohibit stock-market analysts from talking to newspapers that fail to disclose the analyst's conflicts of interest.<sup>1</sup>

Before the ink had dried on these new laws and regulations, investment banks' stock analysts began to attract scrutiny for their own conflicts of interest. Many banks were simultaneously soliciting business from corporate clients and recommending their stocks to the investing public. Analysts such as Salomon Smith-Barney's Jack Grubman found themselves under pressure to recommend losing stocks to their firms' customers, in order to secure more business for their client firms. Enron itself paid \$323 million to investment banks in underwriting fees between 1986 and 2001 (Vickers et al., 2002), and many analysts continued recommending Enron stock even as its value plummeted. In fact, 11 out of 16 analysts who followed Enron labeled it "Buy" or "Strong Buy" less than a month before Enron's bankruptcy filing (Vickers et al., 2002). Not isolated to Enron stock, the preponderance of "Buy" recommendations is ubiquitous. In the early '90s, analysts' "Buy" recommendations outnumbered "Sell" recommendations by about 6:1, and by the end of the decade the ratio had soared to 50:1 (Michaely & Womack, 1999). What has been the response? There have been a limited number of lawsuits and financial settlements, but the major policy response has again been disclosure. Major media sources of financial information, including CNBC and CNNfn, now require all stock analysts to disclose any conflicts of interest that they have when offering televised advice on stocks.

Disclosure has found a privileged place in all professions. For example, medical doctors face a number of different conflicts of interest, but the issue that has received the most recent

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<sup>1</sup> See amendments to Rule 472 ("Communications with the Public"); Rule 351 ("Reporting Requirements"); and

attention has to do with gifts and sponsorship from pharmaceutical companies (Choudhry, Stelfox, & Detsky, 2002; Dana & Loewenstein, 2003; Tenery, 2000). While responses to these potential conflicts of interest are a matter of hot debate within the medical community (Kassirer, 2005), again, one measure on which most medical societies have been able to agree is disclosure (AMA, 2005). Physicians are supposed to disclose their sources of funding when publishing research results or presenting them at conferences. However, one survey reported that less than one percent of conflicts are disclosed for scientific articles, including those in medicine (see Krinsky & Rothenberg, 2001). Disclosure has even become an increasingly popular response to conflicts of interest in academia (see American Association of Universities, 2001), where relationships between industry and academia are on the rise.

### **Defenders of Disclosure**

Supporters of disclosure argue that it improves market efficiency, increases welfare, and protects the public by reducing information gaps between the informed and uninformed (Healy & Palepu, 2000; Gunderson, 1997; Dye, 2001; Verrecchia, 2001). This much is plausible: those receiving information would want to know if anything compromised their information source, so they could then take that information with a grain of salt. U.S. Senator Philip Hart went so far as to argue that disclosure is a *sufficient* response to conflicts of interest within political domains. Hart insisted that disclosure reveals the possibility of conflict, that it lets the voter decide whether that conflict had an influence on the public official, and that it lets those officials decide how to respond (Hart, 1975). As this dissertation shall show, however, what recipients do with

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SEC's simultaneous ruling with NASD Rule 2711 ("Research Analysts and Research Reports").

the disclosures they receive and how information providers might "respond" is more problematic than has been previously assumed.

If disclosure is to work, information recipients must first be able to estimate whether and to what extent the disclosed problem or conflict has influenced the information provider.

Second, the recipients must be able to correct this influence. Third, the disclosure should not have any negative effects in its own right, at least none that are left uncorrected by the recipients.

These conditions are often simply not met...

**CHAPTER II (COINS)**  
**THE DIRT ON COMING CLEAN:**  
**PERVERSE EFFECTS OF DISCLOSING CONFLICTS OF INTEREST**

Conflicts of interest can lead experts to give biased and corrupt advice. Although disclosure is often proposed as a potential solution to these problems, we (Cain, Loewenstein & Moore, 2005a, 2005b, 2005c) show that it can have perverse effects. First, people generally do not discount advice from biased advisors as much as they should, even when advisors' conflicts of interest are honestly disclosed. Second, disclosure can increase the bias in advice because it leads advisors to feel morally licensed and strategically encouraged to exaggerate their advice even further. As a result, disclosure may fail to solve the problems created by conflicts of interest and may sometimes even make matters worse. In this chapter, we document such perverse effects in an experiment designed to replicate the major features of many situations characterized by conflicts of interest.

**Potential Pitfalls of Disclosure**

Crawford and Sobel (1982) present a theoretical analysis of a situation that could be characterized as a fully disclosed conflict of interest. In their model, an agent (who we will call the "estimator") attempts to estimate the value of an uncertain quantity and is then rewarded based on the accuracy of her estimate. The estimator is provided with information by a second individual (the "advisor") who has incentives that are different from those of the estimator.<sup>2</sup>

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<sup>2</sup> Crawford and Sobel refer to the two agents as the "receiver" and "sender," respectively. We use the terms estimator and advisor to draw connection between their work and our experimental study, in which our terms more accurately describe the experimental setup.

Crawford and Sobel show that the estimator's use of the information provided by the advisor, and the expected utility to each agent, rise as a function of the alignment of the two agents' interests. Probably because it would require a myriad of extra assumptions and would seriously complicate their already complicated analysis, Crawford and Sobel do not examine the case of asymmetric information in which the estimator does not have full information about the advisor's incentives. But understanding what happens in this situation, and examining the effects of moving from this situation to one in which the conflict of interest is common knowledge, is key to understanding the effects of disclosure.

What should one expect to happen when conflicts of interest are disclosed? Revelation of the fact that their interests are not aligned should logically lead estimators to be much more suspicious of their advisors and to place less weight on the information that advisors provide. If advisors with conflicts of interest do indeed provide biased advice, then a decrease in estimators' reliance on the biased information should tend to decrease advisors' payoffs and increase estimators' payoffs. Such an analysis, however, makes a number of simplifying assumptions. Most importantly, it assumes that estimators know what to do with the information that is disclosed. There are grounds for skepticism regarding this assumption.

First, estimating the impact of a conflict of interest on an advice-giver is an extraordinarily difficult problem that requires both economic and psychological insight. To properly estimate the degree to which a particular advisor is biased by a conflict of interest, one would want to know the extent to which the advisor embraces professional norms, or is instead corrupt. One would also want to know how tempting the advisor finds the incentives for providing biased advice to be, and one would want to have an accurate "mental model" of how

such incentives can bias advice. However, prior research suggests that most people have an incorrect understanding of the psychological mechanisms that transform conflicts of interest into biased advice. While most people think conflicts of interest are a problem of overt corruption, i.e., that professionals consciously and intentionally misrepresent the advice they give so as to secure personal gain, considerable research suggests that bias is more frequently the result of motivational processes that are unintentional and unconscious (for summaries of this research, see: Dana & Loewenstein, 2003; Moore & Loewenstein, 2004). Failing to appreciate the role of unconscious bias will cause estimators to underestimate the extent to which advice might be distorted.

Second, there is at least suggestive evidence that people tend to be naturally trusting and credulous toward their own advisors. In the domain of medicine, for example, research shows that while many people are ready to acknowledge that doctors might generally be affected by conflicts of interest, few can imagine that *their own doctor* would be affected (Gibbons et al., 1998). Indeed, it is even possible that disclosure could sometimes *increase* rather than decrease trust, especially if the person with the conflict of interest is the one who issues the disclosure. Research suggests that when managers offer negative financial disclosures about future earnings, they are regarded as more credible agents, at least in the short term (Mercer, 2005). Thus, a patient whose doctor who tells him that her research is funded by the manufacturer of the medication that she is prescribing might then think (perhaps rightly) that the doctor is going out of her way to be open or that she is "deeply involved" and thus knowledgeable. This could cause the estimator to place more rather than less weight on the advisor's advice.

Third, even when estimators realize that they should make some adjustment for the conflict of interest that is disclosed, such adjustments are likely to be insufficient. As a rule, people have trouble unlearning, ignoring, or suppressing the use of knowledge even if they are aware that it is inaccurate (Wilson & Brekke, 1994). Research on "anchoring," for example, shows that quantitative judgments are often drawn toward numbers ("anchors") that happen to be mentally available. For example, consider the following questions: What are the last three digits of your phone number? Now add 400 to that number and think of the resulting sum as a year date. Now, consider whether Attila the Hun was defeated in Europe before or after that date. Finally, in what year would you guess that Attila the Hun was actually defeated?

The correct answer is 451 A.D. Russo and Shoemaker (1989, p. 90) asked respondents the above questions and found that participants' answers were strongly influenced by the "dates" computed from their telephone numbers—dates that were obviously irrelevant. The problem is that many valuations are not directly retrieved from memory, but instead are constructed *online*, in response to a query (Chapman & Johnson, 1999; Payne, Bettman & Johnson, 1992). Thus, uninformative starting points that are present at the time of questioning can powerfully influence valuations. Some have argued that biases in human judgment that are so powerful in the experimental laboratory, are weaker in more information-rich naturalistic settings (Gigerenzer, 1991; Hogarth, 1981). Not so for the anchoring effect, which is extremely robust and affects both novice and expert alike (Northcraft & Neale, 1987), even when explicitly motivated to avoid these biases (Wilson, Houston, Etlings & Brekke, 1996).

Much of the previous research on anchoring dealt with numerical anchors shown to be completely irrelevant to the evaluation at hand. That way, any assimilation towards the anchor

was easy to identify as a bias. For example, most anchoring studies begin with a difficult question and then offer a possible answer (the anchor). This "advice" usually comes with a disclosure that says, in effect, "This number was randomly generated, so ignore it completely" (see: Strack & Mussweiler, 1997; Tversky & Kahneman, 1974). We, on the other hand, ask how judgments are influenced by biased anchors that are not completely irrelevant to the task at hand, but may nonetheless be misleading. Advocates of disclosure might think that disclosures of conflict of interest will alert the audience more than would the discounting cues commonly used in the anchoring paradigm. After all, it makes sense that one might be more attuned to guard against manipulative influence than against randomly generated anchors; and, most people will report that randomly generated anchors do not influence their judgment. On the other hand, if we discover that someone is trying to manipulate us, we are more likely to be on our guard.

Nevertheless, anchoring effects hold even when those anchors are known to be irrelevant (Strack & Mussweiler, 1997; Tversky & Kahneman, 1974), unreliable (Loftus, 1979), or even manipulative (Galinsky & Mussweiler, 2001; Hastie, Schkade, & Payne, 1999). Galinsky and Mussweiler (2001) found that first offers (obviously given with manipulative intent) were powerful anchors that influenced final outcomes in negotiation; they manipulated who made the first offer and found that when buyers made the first offer, final sale prices were lower than when sellers made the first offer. Chapman & Bornstein (1996) also show assimilation to a manipulative anchor in a mock jury trial. The plaintiff requested an award for damages that was experimentally manipulated from \$100 to \$1 billion. The authors found that requests were strongly correlated with awards. Hastie, Schade, & Payne, (1999) conducted a similar study in which the plaintiff asserted that an award either "in the range from \$15 million to \$50 million" or



"in the range from \$50 million to \$150 million" would be appropriate. The median awards were \$15 million and \$50 million respectively. This shows the power of the plaintiff's anchor, despite the judge's instruction that "The attorneys' recommendations are *not* evidence." In actual courtrooms, Ebbesen and Konecni (1975) found that criminal court judges set defendants' bail nearest the prosecuting attorney's recommendation, which happened to be the first formal proposal the judges heard. Finally, Northcraft and Neale (1987) found that manipulating the actual listing price of a piece of real estate had a consistent and large effect on professional real estate agents' appraisals. This despite the fact that such appraisals are supposed to be based on more objective criteria, such as location, size, condition of property, and inputs on recent sale prices of comparable homes.

Cain & Moore (unwritten experiment) conducted a study that examined the effect of disclosures of manipulative intent on anchoring. We began with the standard anchoring paradigm: 112 students answered a series of questions on such topics as the population of the United States. By answering more accurately, participants increased their chances of winning one of three \$100 prizes. First, participants were provided with an anchor value that was either 50% higher (a U.S. population of 422 million people) or 50% lower (141 million people) than the true value (281 million people) and asked whether they believed the true value was above or below this anchor. Crossed with this anchoring manipulation was a manipulation of disclosing the putative source of the anchor value: Before they answered the questions, participants received one of four such disclosures: high, low, random, or boilerplate. Participants who received the high disclosure were warned, "When you answer, remember that the suggested answers were provided by someone who was trying to get you to give an answer that was

artificially high." Those who received the low disclosure were likewise warned that the suggested answers came from someone who was trying to get them to answer low. The random disclosure, like previous anchoring studies, told participants that suggestions had been randomly generated. The boilerplate disclosure was designed to mimic the sorts of vague disclosures commonly used in industry<sup>3</sup> and warned participants that, "When you answer, remember that the suggested answers were provided by someone who may have been trying to get you to answer one way or another." The results showed a powerful effect of the anchoring manipulation. Participants' overall test scores were driven largely by the anchor suggested to them: across all disclosures, the mean test z-score (.3453) of answers that were preceded by a high anchor was significantly higher than the mean test z-score (-.3520) of answers preceded by a low anchor. The disclosures had no significant main or interaction effects on participants' responses.

Research on the "curse of knowledge" (Camerer, Loewenstein, & Weber, 1989) shows that people's judgments are influenced even by information they know they should ignore. And research on what has been called the "failure of evidentiary discreditation" shows that, when the evidence on which beliefs were revised is totally discredited, those beliefs do not revert back to their original states, but show a persistent effect of the discredited evidence (Skurnik, Moskowitz, & Johnson, 2002; Ross, Lepper & Hubbard, 1975). Finally, attempts to willfully suppress undesired thoughts can lead to ironic rebound effects, in some cases even increasing the spontaneous use of undesired knowledge (Wegner, 1994). In sum, diverse lines of research suggest that estimators may not discount advice from biased advisors as much as they should

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<sup>3</sup> Charles Schwab & Co., for example, has used the following boilerplate disclosure on its legal documents to cover every potential eventuality: "Schwab and/or its employees or directors as well as consultants to Schwab may have or may have clients with positions in securities or companies referenced in Information, including Research Reports,

when conflicts of interest are disclosed, and that in some circumstances disclosure may even lead estimators to put *greater* weight on biased advice.

Turning to the advisors, there are two ways that disclosure could potentially affect the advice that they provide to estimators. The first involves the advisors' *strategic* response to the disclosure of their conflict of interest. Logically, it is not clear how self-interested advisors should respond to disclosure of their conflict of interest. On one hand, disclosure might deter advisors from giving biased advice by increasing their concern that estimators will completely discount extreme advice or attribute corrupt motives to advice that seems even remotely questionable. On the other hand, advisors might be tempted to provide even more biased advice to counteract the diminished weight that they expect estimators to place on the advice; this "strategic exaggeration" is like expecting one's audience to "cover its ears" and thus compensating for this by "yelling even louder."

The second way that disclosure could influence the behavior of advisors involves what we call "moral licensing."<sup>4</sup> While Crawford and Sobel's model assumes that both agents' motivations are purely selfish, real professionals often are also motivated by a desire to live up to the norms of their profession. Only a hardened cynic would believe that doctors are not motivated by concerns for their patients, that attorneys are indifferent regarding ethical and professional conduct, and that auditors only care about lining their pockets and not at all about fulfilling their legal obligation to provide unbiased audits. Indeed, the whole notion of a conflict

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and may, as principal or agent, buy from or sell to customers. From time to time, Schwab may perform investment banking or other services for, or solicit such services from, companies mentioned in Information."

<sup>4</sup> Monin and Miller (2001) discuss a concept similar to moral licensing that they call "self-licensing."

They show that, once people demonstrate that they are not morally corrupt in some way, they are more likely to display exactly this corruption on subsequent tasks. For example, when people are given the opportunity to exhibit egalitarianism, they will subsequently be more likely to act on racist or sexist stereotypes.

of interest assumes that professionals do experience such a conflict between self-interest and professional responsibilities. To the degree that people care about their professional responsibilities, disclosing conflicts of interest can potentially backfire by reducing advisors' feelings of guilt about misleading estimators and thereby giving advisors moral license to bias advice even further than they would without disclosure. With disclosure of a conflict of interest, giving biased advice might seem like fair play. So, while most professionals might care about their clients, disclosure regulation can encourage these professionals to exhibit this concern in a merely perfunctory way.

In sum, there are good reasons to worry that disclosure might not mitigate the problems caused by conflicts of interest and might even exacerbate them, increasing the bias in advice offered without producing commensurate discounting on the part of estimators.

In addition, both economic and psychological factors should lead to an increase in the *variance* of estimators' estimates as a result of disclosure. From an economic perspective, as Crawford and Sobel's analysis shows, estimators should discount advice to the extent that they believe the incentives of the advice-giver diverge from their own incentives. Disclosing conflicts of interest should therefore cause estimators to fall back on their own private information. To the extent that this private information is unreliable, as is the case in our experiment, such estimates are likely to be highly dispersed. From a psychological perspective, different advisors are likely to differ in the degree to which they are altruistic versus self-interested, and different estimators are likely to differ in their beliefs about the extent of altruism or self-interest among advisors. Both forms of heterogeneity should, again, increase the variance of estimators' estimates when the conflict of interest is disclosed.

## Study 1: COINS

To investigate the impact of disclosure of conflicts of interest, we conducted an experiment in which subjects played one of two roles: estimator or advisor. Estimators attempted to estimate an uncertain quantity and were rewarded for accuracy. Advisors were provided with more information than estimators and were instructed to provide estimators with advice. In a control treatment, advisors, like estimators, got paid more when estimators answered accurately. This alignment of incentives was disclosed. In the other two, "conflict of interest" treatments, advisors got paid more when the estimator responded with a *high* (relative to actual value) rather than an accurate estimate. We examined the impact of disclosure by disclosing this conflict of interest in one of the conflict of interest conditions but not in the other.

We test the following three predictions:

1. Estimators' estimates will be less reliant on advisors' advice with disclosure than without disclosure.
2. Advisors with conflicts of interest will give more biased advice under conditions with disclosure than without disclosure.
3. Estimators will make higher and more dispersed, and therefore less accurate estimates with disclosure of conflicts of interest than without their disclosure, which will lead to:
  - a. lower payoffs for estimators, and
  - b. higher payoffs for advisors.

The first prediction describes rational behavior on the part of estimators and is consistent with a standard economic analysis. The second follows from the strategic and moral-licensing mechanisms discussed in the previous section. The third derives from the reasons, also discussed

in the previous section, for why estimators are unlikely to adjust adequately for knowledge of the conflicting incentives of advisors when these are disclosed. In addition to these basic predictions, we also examine other factors, such as the effect of feedback on estimator and advisor payoffs.

## **Experimental Method**

Participants were 147 undergraduate students at Carnegie Mellon University, recruited for pay ("\$6-\$15 per hour, with an average of \$10"). They participated 6 to 10 at a time and were randomly assigned to either the role of advisor or estimator, which they retained throughout the experiment. The estimation task involved estimating the values of jars of coins. Estimators were paid according to the accuracy of their estimates, and advisors were paid –depending on the experimental condition– either based on how accurate or how high (relative to actual values) the estimators' estimates were.

Participants were seated at cubicles and were given codes that kept their identities anonymous from one another. There were six jars and thus six rounds, and the presentation-order of the jars varied session by session. In each round, advisors took turns at closely examining a jar of coins and then completed an Advisor's Report. Each Advisor's Report contained the advisor's suggestion of the value of the jar in-question and provided a space in which the estimator would write an estimate of the jar's worth (Appendix 2 contains sample report from Study 2, which is very similar to the reports used in Study 1, except the disclosures are different). Once advisors wrote their suggestions on the Advisor's Reports, the reports were then handed to the experimenter, who shuffled them and gave one to each estimator. Each estimator got one report per round, with an equal probability of getting any advisor's advice,

including that of the same advisor from whom they had received advice in the prior round. If there were an odd number of participants in a session, we had one more estimator than we had advisors and one Advisor's Report was randomly selected for duplication.<sup>5</sup> These procedures were made transparent to participants before the experiment began.

After seeing the reports, the estimators saw the jar in question—but only from a distance of about three feet and only for about ten seconds: The experimenter held the jar in front of estimators turning the jar while walking along a line, across the room and back. Estimators then attempted to estimate the value of the coins in the jar.

The amount of money in each of the six jars was determined somewhat arbitrarily to lie between \$10 and \$30, and advisors were informed of this range. Estimators were told that advisors had information about the range of actual values, but were not given this range of values themselves. In fact, the values of the jars, labeled M, N, P, R, S, and T were: Jar M = \$10.01; N = \$19.83; P = \$15.58; R = \$27.06; S = \$24.00; and, T = \$12.50. In the first three rounds, neither estimators nor advisors received feedback about their actual payoffs or about actual jar values. In each of the last three rounds, however, after advisors had given their advice and estimators had made their estimates, each advisor was shown the estimate of the estimator to whom their advice was given on the previous jar and, for each of the feedback rounds, the actual value of the jar in-question was announced to everyone at the end of the round. Since payoff schedules (described below) were provided to all participants at the very beginning, feedback allowed both advisors and estimators to calculate how much money they had made in the previous round

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<sup>5</sup> Our analysis does not include these duplicates when examining what advisors did, but does include duplicated advice when examining what estimators did (since a unique estimator's reaction to even duplicated advice is informative).

before continuing onto the next round. While estimators did not see the advisor's instructions, advisors saw a copy of the estimator instructions and thus could also use feedback to calculate their estimator's payoffs.

Both estimators and advisors were paid based on the estimator's estimates. Estimators were always paid based on the accuracy of their own estimates. Advisors' remuneration depended on the condition to which they were assigned, as described in Table 1a and 1b. In the "accurate" condition, they were paid according to how accurate the estimators' estimate was, and this was disclosed on the Advisor's Report, underlined in bold, 14-point (large) font, right under the advisor's suggestion (i.e., "**Note: The advisor is paid based on how *accurate* the estimator is in estimating the worth of the jar of coins**"). In the "high-undisclosed" and "high-disclosed" conditions, advisors were paid based on how high the estimators' estimate was. This conflict of interest was not disclosed in the high-undisclosed condition, but was disclosed in the high-disclosed condition again with a message (i.e., "**Note: The advisor is paid based on how *high* the estimator is in estimating the worth of the jar of coins**") underlined in bold, 14 pt. font, immediately under the advisor's suggestion. In addition to being remunerated based on their estimators' estimates, all advisors had an additional opportunity to earn money: After they had completed the report for each jar, advisors were asked to give their own personal best estimates of the true value of the coins in the jar, and were rewarded based on accuracy (see Table 1c). Participants were instructed that, at the end of the experiment, one of the six rounds would be randomly selected to serve as the "payoff round." Any money earned in that round (including earnings based on estimators' estimates, and for



advisors, based additionally on their personal estimates) would be paid in cash in addition to a \$7.50 base payment. Participants were encouraged to ask questions if they did not understand any of the instructions. Simple yes or no answers sufficed to answer the few questions that arose.

## Results

Results from the experiment were analyzed with repeated measures analyses of variance (ANOVA) in which independent variables were (1) the experimental condition, which was manipulated between subjects, and (2) round (1-6), which was measured within subjects. Planned contrasts compared the accurate condition to the two high conditions and compared the high-undisclosed condition to the high-disclosed condition.<sup>6</sup>

*Advisors' suggestions and personal estimates.* Advisors' suggestions differed substantially across the three conditions,  $F(2, 59) = 9.76, p < .001$ . The mean actual jar value (across the six jars) was \$18.16, but the mean value of advice given by incentive-condition across jars was \$16.48 in the accurate condition, \$20.16 in the high-undisclosed condition, and \$24.16 in the high-disclosed condition.

As the first of these estimates suggests, there was a general tendency to underestimate jar values when incentives were aligned. Table 2 presents actual values for the six jars, and compares these to the mean personal estimates of advisors in the accurate condition. Advisors tended to underestimate the value of the jars, in some cases quite dramatically. Below, we address the problems that resulted from this underestimation.

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<sup>6</sup> Our analyses omitted two suggestions that were extreme outliers (\$.01 and \$4000). Both suggestions were from the same advisor who was in the high-disclosed condition. The \$.01 suggestion is more than 3 standard deviations below the mean suggestion for that condition and \$4000 is more than 500 standard deviations above the mean. All other suggestions, across all jars and all conditions, ranged between \$2.75 and \$96.00.

Table 3 lists advisors' personal estimates (row 1), suggestions (row 2), and compares advisor's suggestions in row 3 to actual jar values, in row 4 to the mean value of advisor personal estimates of jar values in the accurate condition (we call this virtual error<sup>7</sup>), and finally, in row 5, to each advisor's personal estimate of jar values. Table 3 thereby provides (in rows 3-5) three different measures of advisors' propensity to exaggerate jar values in the three conditions. Planned pairwise comparisons on each of the three measures demonstrate that advisors gave jar-value estimates that were higher in the high (i.e., conflict of interest) conditions than in the accurate condition ( $p < .01$  for all three measures, by least-significant-difference or LSD test).<sup>8</sup>

More interestingly, as predicted, all three measures also reveal that disclosure led to greater distortion of advice: The amount that advisors exaggerated, calculated by subtracting advisors' own personal estimates from their public suggestions, was significantly greater in the disclosure condition than in either of the other two conditions (Table 3, row 5;  $p < .05$ ) and significantly greater by the other two measures as well: advisor suggestion minus actual jar values, and advisor suggestion minus the average of personal estimates in the accurate condition (Table 3, rows 3 and 4;  $p < .05$  for both). In the accurate condition, for example, advisors provided estimators with suggestions of jar values that were, on average, within one dollar of their own personal estimates. In the high-undisclosed condition, however, advisors gave suggestions that were \$3.32 greater than their own personal estimates, and with high-disclosed

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<sup>7</sup> This "virtual error" is intended to reflect how participants would have done had it not been for the general tendency of our participants to underestimate the value of the jars. In calculating virtual error, we use advisors in the accurate condition to serve as a proxy for determining an impartial subjective value of the jars, since these participants held the jars, saw the jars closer and longer than did estimators, knew a range of true values, and had no incentive to bias their valuations.

<sup>8</sup> Note: Due to missing data points, degrees of freedom fluctuate slightly between tests, particularly the repeated measures analyses in Tables 3, 4, and 5. This also explains, for example, why (in table 3) the standard deviations of the means may fluctuate when comparing rows 2-4 within conditions, and (along with rounding-off errors) it

incentives they gave suggestions that were inflated more than twice as much, at more than \$7 above their own personal estimates. Disclosure, it appears, did lead advisors to provide estimators with more biased advice.

The first row of Table 3 shows that advisors in both high-undisclosed and high-disclosed conditions believed that the coin jars were more valuable than did advisors in the accurate condition, though this difference was not significant,  $F(2, 56) = 1.76, p = .18$ . This hints at the possibility that advisors may, to some degree, have been persuaded by their own suggestions. Perhaps, convincing themselves that the jars were worth more somewhat assuaged their guilt about providing elevated estimates to estimators. Personal estimates were higher still, but not significantly so, under the high-disclosed condition than under the high-undisclosed condition.

*Estimators' estimates.* Table 4 summarizes results for estimators' estimates. Estimates of jar values differed across the three experimental treatments,  $F(2, 66) = 7.99, p < .01$ . Planned comparisons revealed that estimates were higher in the two high conditions than in the accurate condition ( $p < .01$ ), and were also higher in the high-disclosed condition as compared with high-undisclosed condition, though this difference is not significant ( $p = .19$ ).

As the standard deviations listed in row 1 (in parentheses) suggest, estimator estimates were also more widely dispersed, i.e., the variance of estimates was greater, in the two high conditions than in the accurate condition,  $p < .01$ , by Levene's test for the equality of variances. And, consistent with predictions that stem from both economic and psychological considerations, variance appears higher in the high-disclosed condition ( $SD = 5.00$ ) than the high-undisclosed condition ( $SD = 3.56$ ), although this difference is not statistically significant,  $p = .39$ .

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explains why "mean suggestions" [table 3, row2] minus "mean personal estimates" [row1] is not identical to "the

Most importantly, however, and consistent with our pessimistic predictions regarding the potentially adverse effects of disclosure on recipients of advice, mean absolute estimator error is significantly greater with disclosure than without disclosure, whether measured on the basis of actual jar values ( $p < .01$ ) or "virtual" values derived from comparisons with the mean personal estimate of accurate advisors ( $p < .01$ ). Due to the combination of greater bias in advice, and greater dispersion of estimates, estimators were less accurate with disclosure than without it.<sup>9</sup>

*Estimator discounting of suggestions.* In the last row of Table 4, we see that the two high conditions showed increased discounting of advisors' suggestions. In other words, the absolute difference between the suggestions given and the estimates that estimators made was greater in the two high conditions than in the accurate condition ( $p < .05$ ). However, the difference between the high-disclosed and high-undisclosed condition was not significant ( $p = .11$ ).

Although disclosures did increase discounting by estimators, albeit not significantly, this discounting was not sufficient to offset the increase in the bias of the advice they got. As Table 4 (row 4) shows, estimator discounting increased, on average, less than two dollars from the accurate condition to the high-undisclosed condition and less than two dollars and fifty cents from high-undisclosed to high-disclosed conditions. However, Table 3 (row 2) shows that suggestions increased, on average, almost four dollars from accurate compared with high conditions and increased four dollars again from high-undisclosed to high-disclosed conditions. Thus, while estimators in the high-disclosed condition discounted suggestions about four dollars more than did estimators in the accurate condition, the advice given in the high-disclosed

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mean of: suggestions minus personal estimates" [row5].

<sup>9</sup> One might wonder if the payoff schedule, rather than the combination of higher and more diffuse estimates, caused the lower estimator payoffs. It is useless to reanalyze the data with a different payoff schedule, since a different

condition was almost eight dollars higher than advice given in the accurate condition. Instead of correcting for bias, estimates were approximately 28% higher in the high-disclosed condition than in the accurate condition (row 1 of Table 4).

*The bottom line.* Table 5 summarizes payoffs in the three experimental conditions. Although significance levels vary, the basic pattern of results revealed in the table is consistent: Estimators earned *less* money when conflicts of interest were disclosed than when they were not, and advisors made *more* money with disclosure than without disclosure. In addition, estimators made the most money in the accurate condition, in which there was no conflict of interest. Comparing advisors' payoffs across conditions is somewhat more problematic due to differences in their payoff schedules between experimental conditions.

*Effects of feedback.* Recall that subjects received feedback, in the form of actual jar values, in the last three rounds. As a result, feedback about jar values was confounded with simple experience with the estimation task. Although the effects of feedback *per se* are difficult to assess for this reason, the results provided no grounds for concluding that *either* experience with the task or feedback lessened the biasing effects of disclosure. We examined the effect of feedback on overestimation of jar values using a 3 (condition) X 2 (feedback) X 3 (round) ANOVA with repeated measures on the last two factors. Neither the main effect of feedback, or its interaction with the other variables emerged as statistically significant. Feedback not only failed to help estimators, but the trend is actually in the opposite direction, with estimators earning (non-significantly) less in feedback rounds 4-6 ( $M = 1.35$ ) than in non-feedback rounds 1-3 ( $M = 1.64$ ). Advisors, in contrast, earned (non-significantly) more in feedback rounds 4-6

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schedule might have resulted in different advisor and estimator behavior. That said, the next chapter highlights a

( $M = 1.75$ ,  $SD = 1.14$ ) than in non-feedback rounds 1-3 ( $M = 1.61$ ,  $SD = 1.27$ ). Given the small number of rounds, however, the conclusion that feedback doesn't help estimators or helps advisors should be treated with caution. Perhaps with more feedback over a much larger number of rounds, estimators would have eventually realized the extent to which their judgments were being affected by the advice given to them, and perhaps such learning would have been facilitated by disclosure.

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study with a different payoff schedule and finds similar effects of disclosure on payoffs.

**Table 1a: Payoff function for advisors in accurate condition and for all estimators**

If estimator's estimate is within:	Payoff
\$0.00-\$0.50 of true value	\$5.00
\$.51-\$1.00 of true value	\$4.50
\$1.01-\$1.50 of true value	\$4.00
\$1.51-\$2.00 of true value	\$3.50
\$2.01-\$2.50 of true value	\$3.00
\$2.51-\$3.00 of true value	\$2.50
\$3.01-\$3.50 of true value	\$2.00
\$3.51-\$4.00 of true value	\$1.50
\$4.01-\$4.50 of true value	\$1.00
\$4.51-\$5.00 of true value	\$.50

**Table 1b: Advisors' payoff function in conflict of interest conditions**

Estimator's is higher than true value by:	Payoff
\$0.50-\$1.00	\$1.00
\$1.01-\$1.50	\$1.90
\$1.51-\$2.00	\$2.70
\$2.01-\$2.50	\$3.40
\$2.51-\$3.00	\$4.00
\$3.01-\$3.50	\$4.50
\$3.51-\$4.00	\$4.90
\$4.01-\$4.50	\$5.20
\$4.51-\$5.00	\$5.40
\$5.01+	\$5.50

**Table 1c: Advisors' payoff function for personal estimate**

If advisor's estimate is within:	bonus payment
\$0.00-\$0.50 of true value	\$2.00
\$.51-\$1.00 of true value	\$1.75
\$1.01-\$1.50 of true value	\$1.50
\$1.51-\$2.00 of true value	\$1.25
\$2.01-\$2.50 of true value	\$1.00
\$2.51-\$3.00 of true value	\$0.75
\$3.01-\$3.50 of true value	\$0.50
\$3.51-\$4.00 of true value	\$0.25

Table 2:

Actual Jar Values and Advisors' Personal Estimates of Jar Values in the Accurate Condition

	Jar					
	M	N	P	R	S	T
Actual value	\$10.01	\$19.83	\$15.58	\$27.06	\$24.00	\$12.50
Advisor estimates (accurate condition)	11.85	16.73	12.75	18.39	21.30	13.07
sig. of difference	$p < .05$	$p < .01$	$p < .001$	$p < .001$	$p < .10$	$p = .39$

Table 3:

Advisor Exaggeration of Jar Values (Standard Deviations in Parentheses)

	Accurate (n=24)	High/Un- disclosed (n=22)	High/ Disclosed (n=21)	significance of condition	significance of disclosure
Advisor's personal estimate	15.62 (2.39)	16.79 (3.22)	16.95 (3.78)	$p = .18$	$p = .71$
Advisor's suggestion	16.48 (3.50)	20.16 (4.81)	24.16 (8.40)	$p < .001$	$p < .05$
Advisor suggestion minus actual	-1.68 (3.50)	2.00 (4.81)	5.78 (8.51)	$p < .001$	$p < .05$
Advisor suggestion minus average of personal estimates, accurate condition	.75 (3.50)	4.43 (4.81)	8.35 (8.47)	$p < .001$	$p < .05$
Advisor suggestion minus advisor personal estimate	.82 (2.29)	3.32 (4.10)	7.10 (6.35)	$p < .01$	$p < .05$



Table 4:  
Estimator Estimates (Standard Deviations in Parentheses)

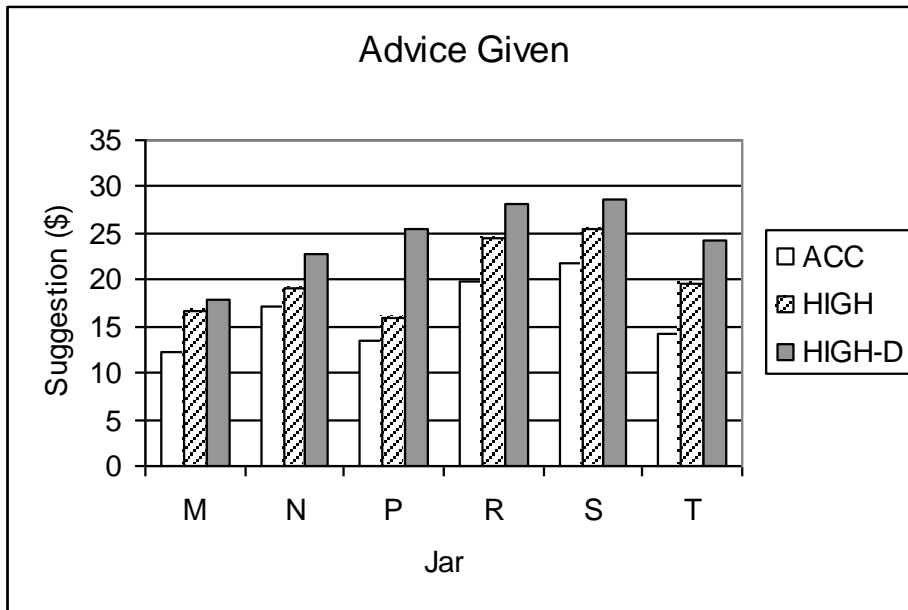
	Accurate (n=27)	High/Un- disclosed (n=26)	High/ Disclosed (n=27)	significance of condition	Significance of disclosure (High conditions)
Estimator estimate	14.21 (2.20)	16.81 (3.56)	18.14 (5.00)	$p < .01$	$p = .19$
Estimator absolute error	5.25 (1.58)	5.14 (1.31)	6.69 (2.44)	$p < .01$	$p < .01$
Estimator absolute virtual error*	3.41 (1.36)	4.52 (1.58)	6.20 (2.62)	$p < .001$	$p < .01$
Absolute difference between estimate and advisor's suggestion	3.61 (3.27)	5.17 (3.33)	7.64 (5.55)	$p < .05$	$p = .11$

Table 5:  
Estimator and Advisor payoffs per round (Standard Deviations in Parentheses)

	Accurate	High/Un- disclosed	High/ Disclosed	significance of condition	significance of disclosure (High conditions)
Estimator payoff	1.64 (.64)	1.59 (.65)	1.25 (.81)	$p = .096$	$p = .052$
Advisor payoff	1.69 (.66)	1.50 (.85)	1.86 (1.18)	$p = .16$	$p = .07$
Estimator 'virtual' payoff*	2.42 (.84)	1.89 (.71)	1.42 (.65)	$p < .001$	$p < .05$
Advisor 'virtual' payoff*	2.35 (.70)	2.08 (1.17)	2.60 (1.34)	$p = .13$	$p < .05$

\*Virtual payoffs use advisors in the accurate condition to serve as a proxy for determining an impartial subjective value of the jars by examining what would have occurred had jars been worth what accurate advisors thought, on average, the jars were worth.

Figure 1:  
Advice provided for each jar, by condition.



### **CHAPTER III (HOUSES) MORE DIRT ON COMING CLEAN**

We (Cain, Loewenstein, & Moore) contribute to theory and research on conflict of interest by examining the effect of disclosures on both providers and recipients of advice. We pair "estimators" who need to estimate a quantity with "advisors" who have better information about that quantity. Some advisors are given incentives that are aligned with estimators, and some are given an incentive to bias the estimators. Crossed with the presence or absence of such a conflict of interest, we also manipulate whether incentives are or are not disclosed. We then examine the impact on both parties of disclosing to estimators the incentives faced by advisors.

Study 2 improves upon our prior study of disclosure's shortcomings. For example, one might argue that study 1 used tasks in which participants were poorly calibrated, such that (1) participants arguably had too little information to protect themselves against what was disclosed as biased advice. And, (2) there was a general underestimation of the correct values in question, so that when conflicted advisors "inflated" their advice, their advice was often accidentally closer to the truth. Thus, unfortunately, discounting conflicted (and supposedly inflated) advice might lead a participant away from the correct answer instead of toward it. The next study provides relatively information-rich stimuli (detailed info about local real-estate) on which participants are better calibrated. And the problems described thus far will be avoided. Furthermore, the next study allows for reputation effects by providing a stable advisor-advisee pairing over several rounds (as opposed to running one-shot interactions as in past studies). Reputation effects – and the enhanced learning environment that a stable, multi-round pairing provides – might protect

recipients of advice from being overly manipulated. Finally, the next study uses handwritten disclosures to ensure that the disclosures are salient to recipients, and the disclosures will make more clear that incentives, when conflicting, are conflicting. In study 1, not only was discounting often in the wrong (but reasonable) direction, it was not significant. Here, however, disclosing a conflict of interest will lead to significant discounting, and this discounting will tend to make estimates more accurate. Thus, this paper can answer the question: Will disclosures' (significant and truly) positive effects win the day for those receiving them?

## **Methods**

A total of 261 people participated, 6 to 10 at a time. Members of the Carnegie Mellon University community were recruited with a promise of "\$8-\$15 per hour, with an average of \$10." Participants sat at cubicles and were given participant-codes in order to maintain their anonymity. Individuals were randomly assigned to either the role of advisor or estimator. These roles were maintained throughout the experiment. Each estimator was randomly paired with an advisor in a pairing that lasted for four rounds of the exercise. The task had estimators estimating actual sale prices of four pieces of local Pittsburgh real estate: homes close to campus that had been listed for sale in a Yahoo! real-estate database (<http://realestate.yahoo.com/>) and eventually sold for a price that was publicly available online. Everyone was paid based on estimators' estimates. The more accurate estimators were in their estimates of actual sale-values, the more they got paid. Advisors' payment schedules varied by experimental condition: advisors were paid based on either how *accurate* or how *high* (relative to actual prices) were the estimates of the estimator with whom they were paired (and these incentives were either disclosed or not

disclosed). There were four houses and thus four rounds, with the presentation order of the houses varying by session.

The homes were labeled by their street address, and sold for the following amounts: House #5392 = \$200,384; House #7518 = \$186,250; House #5248 = \$175,000; House #5301 = \$199,900. Estimators were given an information packet and as much time to examine it as they needed. Information packets contained an exterior photo of the house, a Yahoo! map of its location, as well as basic information on the property (number of bedrooms, number of bathrooms, total number of rooms, the number of floors, year of construction, exterior construction material, roof material, heating system type, square footage, lot size, and, if any: cooling systems, fireplaces, and garage spaces). Sample stimulus materials (of House #5392) are included in Appendix 1.

Prior to seeing this information, estimators were given advice from advisors who were known to have all the information that estimators had, plus information about recent sale prices, tax-assessed values of comparable neighborhood homes, and the tax-assessed value of the home in question. Advisors were given their own information packets and then wrote their suggested sale prices on an "advisor's report" that was transmitted by the experimenter to the estimator (who was on the other side of the room). Each advisor's report provided a space in which the estimator would write his or her own estimate, directly under the advisor's suggested sale price. Estimators were informed that they would get one report per round, each time from the same advisor. Appendix 2 contains a sample "advisor's report."

Whenever there were an odd number of participants in a session, we assigned one more estimator than we assigned advisors and one advisor's report was randomly selected for

duplication: There were 126 participants in the role of advisor and 135 estimators (nine of whom were paired with one of nine advisors whose advice was duplicated each round such that it simultaneously went to two estimators). Our analysis of advisors does not include duplicated advice, but our analysis of estimators does include duplicate advice, since an estimator's reaction to even duplicated advice is informative. Estimators received their advisor's report, which included their advisor's suggestion and the estimator's information packet. After perusing this information, estimators wrote down their own estimate of the selling price of the property. All procedures were explained to participants before the experiment began.

Estimators were always paid more for accurate estimates, as described in Table 1a. Advisors' pay depended on the condition to which they were assigned, as described in Table 1a and 1b. In the "accurate disclosed" condition, they were paid more when their estimators' estimate was accurate, and this was disclosed on the advisor's report: Advisors were instructed to neatly print exactly the following disclosure, immediately under their suggestion: "**As an advisor, I am required to inform you that I am paid based on how *accurate* your estimate of the property sale-price is relative to the actual sale-price.**" In the "accurate" [undisclosed] condition, no such disclosure was required or allowed to be made. In the "high" [undisclosed] and "high-disclosed" conditions, advisors were paid based on how high the estimators' estimate was, compared to the actual sale price. This conflict of interest was not disclosed in the high-undisclosed condition, but was disclosed in the high-disclosed condition, again with a required handwritten message: "**As an advisor, I am required to inform you that I am paid based on how *high* your estimate of the property sale-price is relative to the actual sale-price.**" Thus, there were four conditions: accurate, accurate-disclosed, high, and high-disclosed. After

completing the advisor's report, all advisors were asked to make their own personal best estimates of the sale price, and were additionally rewarded based on the accuracy of these personal estimates, as per Table 1c.

As was made clear to everyone at the outset, in the first two rounds, neither estimators nor advisors received feedback about their actual payoffs or about actual sale prices. At the beginning of each of the last two rounds, however, each advisor was shown the estimate of the estimator to whom their advice was given in the previous round, and the actual sale price of the house in question was publicly announced. In other words, at the beginning of round 3, feedback on what occurred in round 2 (and at the beginning of round 4, feedback on round 3) was given to everyone so that participants could change their behavior accordingly in the current rounds (rounds 3 and 4). Since payoff schedules were provided to participants at the very beginning, feedback allowed both advisors and estimators to calculate how much money they themselves had made in the previous round before continuing on to the next round. Each advisor saw a copy of the estimator's instructions and thus could also use this feedback to calculate the payoffs of the estimator with whom the advisor was paired.

As was made clear at the outset, at the experiment's conclusion, one of the four rounds would be randomly selected for computing actual payoffs. Participants would receive a \$7.50 base payment plus any money earned in the payoff round, paid in cash. Participants were encouraged to ask clarifying questions, which were few and were answered by simple yes or no answers. At the conclusion of the experiment, participants were paid, debriefed, and dismissed.

## Results and Discussion

Since the two disclosures (1: of aligned/accurate incentives, and 2: of conflicted/high incentives) were of quite different sorts in addition to being absent or present, this created four unique conditions. Thus, except where otherwise mentioned, we subjected our results to a 4 (condition: accurate, accurate-disclosed, high, high-disclosed) X 1 analysis of variance (One-Way ANOVA); the dependant variable was the participant's responses (e.g., suggestions) averaged together across each of the four rounds. Planned contrasts compared the two accurate conditions against the two high conditions (to test the effect of incentives: accurate vs. high), and compared the high conditions against the high-disclosed conditions (to test the effect of disclosing vs. not disclosing a conflict of interest). We also verified that the two accurate conditions were not significantly different in any of our tests.

*Advisors' personal estimates:* Table 2 presents actual prices for the four houses, and the mean personal estimates of advisors across both accurate conditions. These estimates reveal that advisors were relatively accurate in their estimates. Actual sale-prices ranged roughly from \$175,000 to just over \$200,000, with advisors' mean personal estimates ranging from roughly \$165,000-\$220,000 in the accurate conditions. Three of the house prices were overestimated, on average, and one was underestimated. Mean estimates were crudely correlated with actual prices, with the least expensive house receiving the lowest mean personal estimate, the second-least expensive house receiving the second lowest mean personal estimate, and the two houses that were roughly tied for most expensive receiving the two highest, and roughly tied, personal estimates.



*Advisors' suggestions:* Table 3 presents mean advisor personal estimates for all conditions (row 1), suggestions (row 2), the difference between advisor's suggestions and actual sale prices (row 3), and the difference between advisors' suggestions and their personal estimates (row 4). The second row of the table shows that advisors' suggestions and personal estimates (row 1) were similar in the two accurate conditions, but that suggestions were inflated in the high (conflict of interest) conditions and especially inflated in the high-disclosed condition: The mean suggestion given across houses was \$204,331 in the accurate-undisclosed condition, \$204,640 in the accurate-disclosed condition, but \$236,137 in the high-undisclosed condition, and \$255,394 in the high-disclosed condition. Figure 1, which displays mean advisors' suggestions broken down by condition and round, shows that this basic pattern occurred in every round.

Planned comparisons show that advisors gave sale-price suggestions that averaged more than \$40,000 higher in the conflict-of-interest conditions than in the accurate conditions,  $p < .001$ . Rows 3 and 4 of Table 3 provide two additional measures of advisors' propensity to exaggerate house prices in the four conditions, one relative to actual sale-prices and the other relative to advisors' own personal estimates. Planned contrasts again showed that conflicted advisors exaggerated more than non-conflicted advisors, ( $p < .001$ , for both measures).

Advisors in the accurate conditions had no incentive to bias their advice, except possibly to counteract estimator bias in order to sway the estimator towards accuracy. Disclosure did not change this fact, and there were no significant differences (in any of our comparisons) between the accurate and accurate-disclosed conditions.

Planned contrasts show that all three measures of exaggeration also reveal that disclosure led to greater distortion of advice when there was a conflict of interest. In the high-undisclosed

condition, advisors gave suggestions that were \$31,351 greater than their own personal estimates; but with disclosure they gave suggestions that were inflated at \$51,562 above their own personal estimates. These values are significantly different from one-another,  $p < .05$ . The third row displays a similar pattern of exaggeration – i.e., advisors in the high-disclosed condition also gave suggestions that were more inflated relative to actual prices than did advisors in the high-undisclosed condition,  $p < .05$ . Finally, as evident in the second row of the table, simple suggestions provided by advisors were more inflated in the high-disclosed condition than in the high-undisclosed condition,  $p < .05$ .

*Discounting of advice by estimators:* Table 4 summarizes results for estimators' estimates. As the first row of Table 4 shows, the two conflict of interest conditions contain greater discounting of advisors' suggestions. Discounting, as measured by subtracting estimators' estimates from the suggestions they received, was greater in the two conflict of interest conditions than in the accurate conditions, as revealed by a planned contrast,  $p < .001$ . The difference in discounting between the high-disclosed and high-undisclosed conditions was likewise significant, according to a planned contrast,  $p < .05$ . Disclosing a conflict of interest did lead to greater discounting by estimators. However, as the following analysis shows, this increased discounting was insufficient to undo the increased bias offered by advisors in the high-disclosed condition.

*Estimators' estimates.* The second row of Table 4 presents mean estimator estimates in the four conditions, which were subjected to a 4 (condition)  $\times$  1 One-Way ANOVA. The results reveal a significant effect of advisor incentives,  $p < .001$ . One can see (by comparing columns 1&2 to 3&4) that estimates were over \$20,000 higher in the two high conditions than in the two

accurate conditions. Mean estimates in the high-disclosed condition were over \$25,000 higher than in either accurate condition, and this difference was significant ( $p < .05$  for each accurate condition, by planned contrasts). Thus, disclosure did not undo the damaging effects of conflicts of interest. In fact, as row 2 of Table 4 shows, in the conflict of interest conditions, mean estimator estimates were actually \$8-9K *higher* with disclosure than without disclosure, although the difference was not statistically significant,  $p = .23$ . Furthermore, as the standard deviations listed in Table 4 (row 2; in parentheses) suggest, estimator estimates were also of higher variance with disclosure than without disclosure in the conflict of interest conditions, though the difference is not statistically significant by Levene's test,  $p = .31$ .

*The bottom line.* Figure 2 and Table 5 summarize payoffs in the four experimental conditions. The basic pattern of results does reveal a perverse effect of disclosure. With the given setup, the combination of (non-significantly) higher mean estimates and (non-significantly) higher variance in these estimates made estimators earn over one-third *less* money per house when conflicts of interest were disclosed than when they were not, and this difference was significant by a planned contrast,  $p < .05$ . In addition, advisors made *more* money with disclosure than without disclosure, but this difference is not significant,  $p = .33$ . Because the advisor's payoff schedules also vary between experimental conditions, we did not compare the effect of condition on advisor payoffs. The key finding is that disclosure significantly hurt the financial outcomes of those it was supposed to protect.

*Effects of feedback.* In the last two rounds, estimators and advisors were told the actual sale price for the house from the previous round. This is not an ideal setup to examine the impact of feedback, since feedback about sale prices was confounded with simple experience

with the estimation task. That said, the results did not suggest that *either* experience with the task or feedback decreased disclosure's biasing effects. Looking at the overestimation of sale prices, we examined the effect of feedback using a 4 (condition)  $\times$  2 (feedback)  $\times$  2 (round) ANOVA with repeated measures on the last two factors. Neither feedback's main effect, nor any interaction with the other variables were statistically significant,  $p = .18$ . However, perhaps more feedback and more rounds would have taught estimators how their judgments were being affected by the advice they received, and perhaps disclosure would have enhanced such learning. Note, however, that few real-life house purchasers receive anywhere near the quality and amount of feedback received by the subjects in our experiment. In fact, we would guess that unless they take active steps to obtain such information, most house buyers are unlikely to receive *any* feedback about the prices at which houses they considered, but did not purchase, ultimately sold for.

Moreover, any benefits of providing feedback to consumers of information must be tempered by the commensurate benefits that such feedback confers on providers of information. As repeat players, providers of information are likely to be in a better position, and have greater incentive, to collect and peruse historical information and to learn from experience, including how to manipulate consumers more effectively. Study 1 hinted at this possibility, as feedback rounds made the deleterious effects of disclosure head in even worse directions.

Figure 3 provides a summary of our overall findings. The x-axis depicts advisor suggestions in the four conditions (normalized by actual house prices: suggestion minus actual). The y-axis depicts advisor estimates (again normalized by actual prices: estimate minus actual). The regression lines show the relationship between the suggestions that estimators received and

the estimates they made. Lower slopes indicate greater discounting of advice. The intersecting (horizontal and vertical) lines cross the regression lines where the mean for that condition lies: Horizontal lines represent the mean suggestion-actual for each condition, and vertical lines represent the mean estimate-actual for each condition. The vertical lines' intersections with the x-axis show that advisor suggestions were higher in the two high conditions than the two accurate conditions and higher in the high-disclosed condition than the high-undisclosed condition. The graph also shows that advisor suggestions were discounted to a greater degree in the high-disclosed condition than the high-undisclosed condition, but that this discounting was insufficient to offset the greater exaggeration by advisors in the high-disclosed condition; hence (as the horizontal lines show) the estimates are higher relative to actual prices in the high-disclosed condition than in the high-undisclosed condition.

## **General Discussion**

The findings of our studies, as well as our earlier research (COINS), suggest that disclosure is not a panacea for problems created by conflicts of interest. In fact, our research shows that in some situations disclosure can hurt exactly the people it is intended to help.

It would be a mistake, of course, to conclude from these two studies that disclosure is generally counterproductive. To make such a generalization would require a thorough sampling from the population of disclosures to allow one to draw statistical inferences about disclosure's various detrimental effects and/or lack of sufficient benefits. There are, in fact, situations in which disclosure is likely to be helpful. Specifically, disclosure should help when recipients of advice know how much to discount the advice they receive as a function of the specific conflicts of interest that are disclosed. This could be the case for savvy repeat players such as institutional

investors, experienced attorneys, or managers in government agencies. It is much less likely to apply to personal investors, medical patients, purchasers of insurance, or, most relevant to the current research, home buyers. These consumers are unlikely to possess the knowledge or experience to know how much they should discount advice in light of a disclosure. Our point, then, is not that disclosure is never beneficial, but that there are likely to be many situations in which disclosure fails to help. Future research needs to determine the boundary conditions for when disclosure works, fails, or even makes matters worse.

Table 1a: Payoffs for Estimators.

(Accurate advisors had same payoff schedule, with "Advisor earns" as last column header.)

Estimator's estimate is within	Estimator earns
Within \$2,500 of sale price	\$5.00
Within \$5,000 of sale price	\$4.50
Within \$7,500 of sale price	\$4.00
Within \$10,000 of sale price	\$3.50
Within \$12,500 of sale price	\$3.00
Within \$15,000 of sale price	\$2.50
Within \$17,500 of sale price	\$2.00
Within \$20,000 of sale price	\$1.50
Within \$22,500 of sale price	\$1.00
Within \$25,000 of sale price	\$.50

Table 1b: Payoffs for High Advisors.

Estimator's estimate is <i>at least</i> :	Advisor earns
\$5,000 higher than sale price	\$1.00
\$10,000 higher than sale price	\$1.10
\$15,000 higher than sale price	\$1.30
\$20,000 higher than sale price	\$1.60
\$25,000 higher than sale price	\$2.00
\$30,000 higher than sale price	\$2.50
\$35,000 higher than sale price	\$3.10
\$40,000 higher than sale price	\$3.80
\$45,000 higher than sale price	\$4.60
\$50,000+ higher than sale price	\$5.50

Table 1c: Advisor Bonus for Personal Estimates.

Advisor's personal estimate is within	Advisor earns
\$2,000 of sale price	\$2.00
\$5,000 of sale price	\$1.75
\$7,500 of sale price	\$1.50
\$10,000 of sale price	\$1.25
\$12,500 of sale price	\$1.00
\$15,000 of sale price	\$0.75
\$17,500 of sale price	\$0.50
\$20,000 of sale price	\$0.25

**Table 2:** Actual Sale Prices and Advisors' Personal Estimates across both Accurate Conditions. (Undisclosed and disclosed estimates are averaged together, with all table-values rounded to nearest dollar).

	<u>House#</u>			
	#5248	#7518	#5301	#5392
Actual Sale price	\$175,000	\$186,250	\$199,900	\$200,384
Advisor Estimates (accurate conditions)	\$165,618	\$202,022	\$223,008	\$220,391

**Table 3:** Advisor Exaggeration of Sale Prices. (Standard deviations are in parentheses.)

	Accurate-undisclosed n=26	Accurate-disclosed n=23	High-undisclosed n=36	High-disclosed n=41	Effect of Condition Acc, Acc-D, High, High-D	Effect of Incentives Accurates vs. Highs	Effect of Disclosure High vs. High-D
Advisor's personal estimate	\$202,978 (7,715)	\$200,529 (13,449)	\$203,205 (11,505)	\$203,939 (12,102)	n.s.	n.s.	n.s.
Advisor's suggestion	\$204,331 (6,841)	\$204,640 (8440)	\$236,138 (36,071)	\$255,394 (55,877)	$p < .001$	$p < .001$	$p < .05$
Advisor suggestion minus actual	\$14,040 (7,299)	\$14,685 (7,988)	\$45,788 (36,007)	\$64,1412 (56,079)	$p < .001$	$p < .001$	$p < .05$
Advisor suggestion minus advisor personal estimate	\$1,142 (7,126)	\$3,840 (7,410)	\$31,351 (33,393)	\$51,562 (52,628)	$p < .001$	$p < .001$	$p < .05$



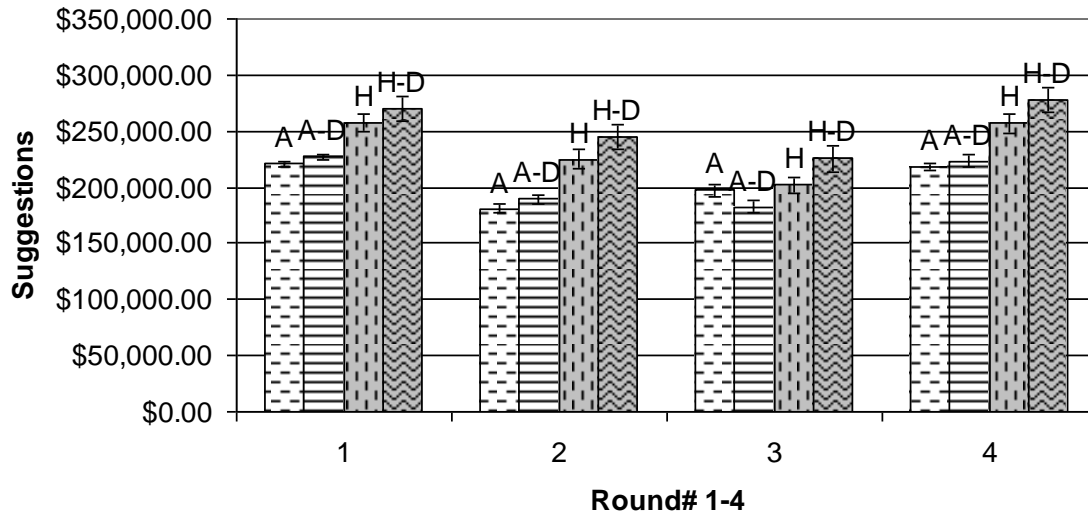
**Table 4: Estimator Estimates.**  
(Standard deviations are in parentheses.)

	Accurate- undisclosed n=31	Accurate- disclosed n=23	High- undisclosed n=39	High- disclosed n=42	Effect of Condition Acc, Acc-D, High, High-D	Effect of Incentives Accurates vs. Highs	Effect of Disclosure High vs. High-D
Discounting: Absolute value of (suggestion- estimator estimate)	\$614 (10,228)	\$805 (10864)	\$11,216 (25,983)	\$25,609 (38,641)	$p < .001$	$p < .001$	$p < .05$
Estimator estimate	\$202,529 (12,495)	\$203,835 (13,038)	\$221,209 (32,885)	\$229,605 (43,613)	$p < .001$	$p < .01$	n.s.

**Table 5: Simple Bottom Line: ANOVA on Estimator and Advisor Payoffs across All Rounds.**  
(Standard deviations are in parentheses.)

	Accurate- undisclosed Est: n=31 Adv: n =26	Accurate- disclosed Est: n=23 Adv n=23	High- undisclosed Est: n=39 Adv: n=36	High- disclosed Est: n=42 Adv: n=41	Effect of Condition Acc, Acc-D, High, High-D	Effect of Incentives Accurates vs. Highs	Effect of Disclosure High vs. High-D
Estimator payoff	\$1.86 (1.00)	\$1.86 (1.00)	\$1.37 (1.17)	\$.87 (.92)	$p < .001$	$p < .001$	$p < .05$
Advisor payoff	\$1.86 (.92)	\$1.86 (1.00)	\$2.67 (1.55)	\$2.98 (1.75)	$p < .001$	$p < .001$	n.s.

**Figure 1:** Advisors' Suggestions for the Four Experimental Conditions across the Four Rounds. (Error bars show standard errors.)



[A= Accurate; A-D = Accurate-Disclosed; H = High; H-D = High-Disclosed]

**Figure 2:** Payoffs for the Two Roles in the Four Experimental Conditions. (Error bars show standard errors.)

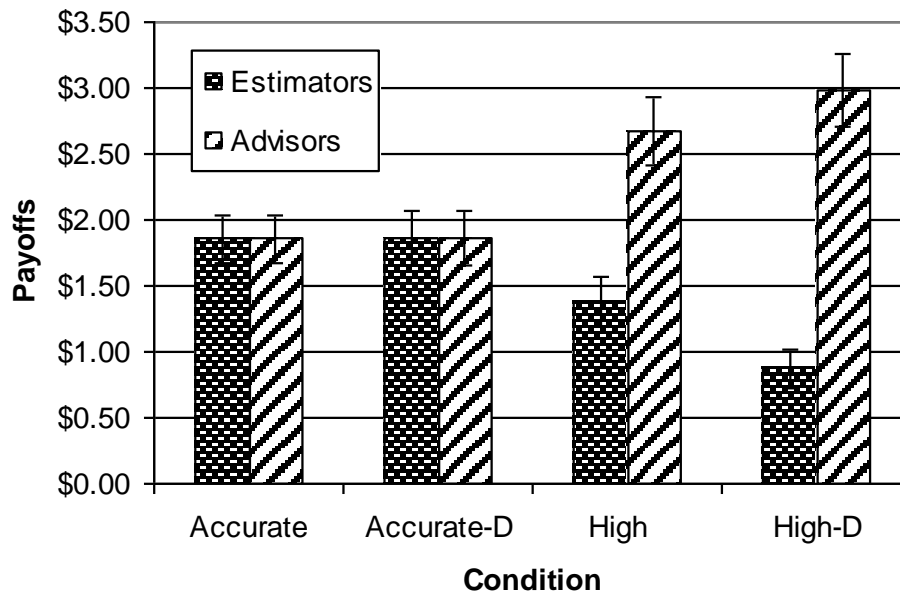
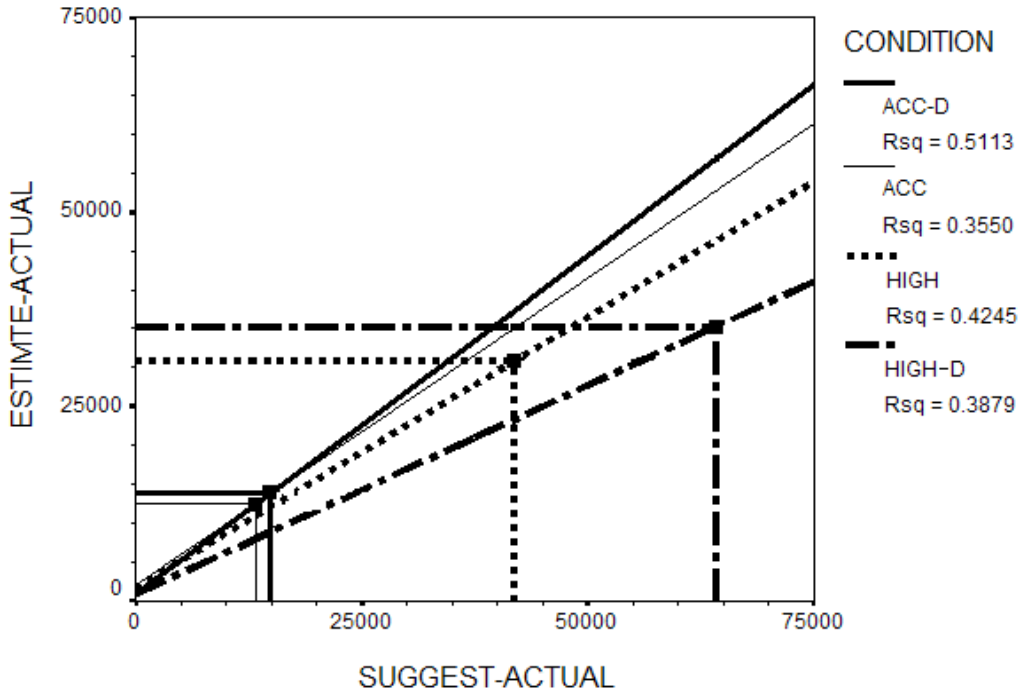


Figure 3: Overall Summary of Findings.

(Horizontal lines represent the mean estimate-actual, by condition; vertical lines represent the mean suggestion-actual, by condition.)



**APPENDIX 1:** Sample Stimulus Material for Advisors. Note: Estimators received this information also, except that the information highlighted in grey (Total Market Value, and TMV/Sale-price of comparable homes) was replaced by "Only advisors have this info."

**APPRAISER INFO: 5392 Wilkins Ave.**  
(Code:5392)

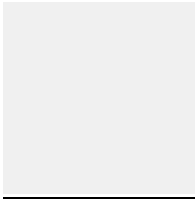


Sale Date: 3/20/2002  
 Sale Price: \$????????  
 Total Market Value \$238,200

LAND - PRIMARY SITE (6232 SQFT). 2 STY OLD STYLE HOUSE  
 W/ PORCH FRAME - OPEN

Building Information

Total Rooms:	8		
Bedrooms:	4		
Stories:	2	Full	Bathrooms: 2
Year Built:	1924	Half	Bathrooms: 1
Exterior Finish:	Brick	Heating:	Central Heat
Roof:	Shingle	Cooling:	
Basement:	Full Basement	Fireplace(s):	1
		Garage:	0
Condition:	Good	Finished Living Area:	2160 Square Foot



Comparable Houses

Address	5262 BEELER	5136 BEELER
Year Built	1924	1929
Sale Price	\$179,000	\$215,000
Sale Date	07/31/2000	09/01/1999
Total M.V.	\$185,400	\$235,300

**APPENDIX 2: Sample Advisor's Report.**

(The disclosure "note" and other info shown in hand-written fonts were to be hand-printed by advisors.)

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**Advisor's report and estimator's Estimate**

I have carefully examined the property information, along with its tax-assessed value and the sale-price of comparable houses. I suggest that it is worth:

For the property coded: 5392,  
the suggested sale-price is:

\$279,000

Advisor's participant code: S401

*\*Note: As an advisor, I am required to inform you that I am paid based on how high your estimate of the property sale-price is relative to the actual sale-price.*

To be completed by the estimator:

Please print neatly what you think was the property's sale-price at the time of sale:

\$ \_\_\_\_\_

Please enter your Participant Code in the blank below and raise your hand when you are finished.

Estimator participant's code: \_\_\_\_\_

**CHAPTER IV**  
**DISCLOSURE IN ORGANIZATIONAL SETTINGS:**  
**REGULATING BEHAVIOR OFF THE BOOKS**

In order to examine whether many of disclosure's problems occur in organizational settings (where communication often occurs within and between groups that might better handle these problems), this chapter uses the literature on group dynamics to extrapolate on the previous chapters and considers how disclosure might work in groups. What follows will address the question of whether groups attenuate or exacerbate the problems that individuals have with disclosure. The answer to this question will likely vary from situation to situation, but some frameworks for predicting the answer will be proposed. Plausible (though not indisputable) evidence will be presented to suggest that many of the problems with disclosure will occur for groups as much as, if not more than, for individuals. The upshot will be that groups are less willing to share information when it is contrary to their self-interests (compared to individuals facing the same decision); therefore, even under rules which require information-sharing, groups may still be more willing to bend the rules in their favor. As such, this chapter provides lessons on the pitfalls of information exchange (between individuals or groups), and it highlights some interesting ways that people follow the letter – but not the spirit – of ethical standards.

Information-sharing within groups is becoming increasingly important as organizations continue to relegate more decisions to groups (Devine, 1999). Efficient information-sharing is crucial in ensuring that work groups are superior to individuals (Phillips, Mannix, Neale, & Gruenfeld, 2004), but as Wittenbuam, Hollingshead, and Botero (2004) argue, prior literature has

tended to focus on domains where group members are unbiased and have no personal motivation to misinform their group (e.g., Stasser & Titus, 1985). Thus, many of the failures of information-sharing within groups have been attributed to cognitive, rather than motivational phenomenon. As is becoming clear, however, even members of our most esteemed professions can offer information that is unintentionally biased toward personal interests if not intentionally corrupt (Moore, Loewenstein, Tanlu, & Bazerman, 2003). Thus, while disclosure is a form of information exchange in its own right, research on disclosure should be particularly useful to those who study information exchange (at both the individual and group level), since these researchers will want to better recognize the possibly biased nature of information-sharing and will want to assess the efficacy of popular responses to such bias.

*Groups of Advisors get Meaner.* People have long doubted the moral virtue of groups. Criticizing town meetings, James Madison (1788) wrote on the mob mentality, "In all very numerous assemblies, of whatever characters composed, passion never fails to wrest the scepter from reason. Had every Athenian citizen been a Socrates, every Athenian assembly would still have been a mob." Insko and his colleagues researched the discontinuity between individual behavior and the behavior of groups (Insko et al., 1988, 1994; Insko, Schopler, Hoyle, Dardis, & Graetz, 1990), finding that group discussions about whether or not to cooperate with another group result in much less cooperation compared to individuals facing similar decisions about cooperating with other individuals. Likewise, Robert and Carnevale (1997) and Bornstein and Yaniv (1998) found similar effects when studying Ultimatum games: Groups offer less than individuals offer, suggesting that groups become less fearful of the respondent's refusal (0,0) or are greedier than individual senders. Groups appear to be particularly selfish, even when there is



some communication between (as well as among) the groups (Dawes, 2001), and when comparing the groups to an individual facing the defecting group (Morgan & Tindale, 2002). Granted, communication enhances cooperation within groups, especially when the communication is centered on the relevant problems that the groups face (Dawes, McTavish, & Shaklee, 1977; Sally, 1995), but this does not necessarily bode well for those facing groups of information providers. Pessimistic attributions of recipients' faults and motivations are more likely to come up in groups (partly because of the sheer number of people making attributions) than for individuals; so, providers may cooperate with each other at the expense of "problematic recipients" who the providers have in common.

Dawes and Messick (2000) argued that the discontinuity between individual behavior and group behavior can be thought of as a combination of (1) differences between individuals vs. groups, and (2) a function of the type of group identification that can be achieved. When it comes to group identification, research has long shown that people will cooperate with those within their group (the "in-group") and will show hostility toward outsiders (the "out-group"), however minimally such groups are constructed and even when everyone's incentives ostensibly do not conflict (Allport, 1954; Tajfel, 1982; Tajfel & Turner, 1986; Hogg & Abrams, 1988; Brewer & Miller, 1996). Thus, the more advisors are grouped together so as to see themselves as being separate from, let alone above, the uninformed, the more self-interested their advice may become. As Allport (1954) proposes and as Brewer (1999) tests, the driving mechanism for such discrimination is in-group favoritism rather than out-group hostility. This suggests that it may not matter if the recipients form a group or a merely collection of individuals, because either may suffer from being "outsiders."

*Do Groups of Advisors take More Risks?* Groups often fall prey to and even sometimes exaggerate systematic errors in judgment and decision-making, e.g., "groupthink" (Janis, 1972; Sims, 1992); "pluralistic ignorance" (Allport, 1933; Prentice & Miller, 1993); "group polarization" (Stoner, 1961; Moscovici & Zavalloni, 1969; Myers & Arenson, 1972); overconfidence (Fischhoff, Slovic, & Lichtenstein, 1977); and other errors (see Tindale, Smith, Thomas, Filkins, & Sheffey, 1996; Thompson, 2004; Wittenbaum et al., 2004). However, not all biased individual behavior becomes more extreme in groups. For example, there is evidence suggesting that group polarization can be a rational response to the framing of problems, not merely a more "extreme" response. Neale, Bazerman, Northcraft, and Alperson (1986) found that, compared to individuals in the same situation, groups become more willing to take risks when confronting potential gains and become more cautious when confronting potential losses. Perhaps, if conflicted advisors think about how much they could gain by manipulating their audience, then groups of advisors may be more likely to risk giving extremely biased (or strategically exaggerated) advice compared to individual advisors. Likewise, even extremely biased advice might be very influential to a group of estimators when that advice is framed as an opportunity for gain to whoever might follow it. The point remains, however, that some biases will be attenuated by group dynamics and others exacerbated, and it is yet unclear how groups will handle conflicts of interest and their disclosure.

*A Framework for Disclosure in Groups: Self Interest.* When it comes to the differences between individual bias and group bias, the research on "shared representation" (Tindale, 1993; Tindale et al., 1996; Tindale & Kameda, 2000; Morgan & Tindale, 2002) provides a possible unifying predictor: whatever information or cues are shared, groups will accentuate their use due

to the common information bias (Stasser & Titus, 1985), leading to enhanced or weakened judgment biases depending upon how such information or cues affect the bias (e.g., for base-rate fallacies in groups, see Argote, Seabright, & Dyer, 1986; for attribution errors in groups, see Wittenbaum & Stasser, 1995). So, will groups of conflicted advisors be cued to become cooperative toward their audiences or selfish instead and how will disclosure further affect this? And, will groups of advice-recipients be more likely than individuals to respond correctly to disclosure? As shall be discussed, the answers will likely depend on what information members of the group share.

As for those providing the advice, perhaps groups (especially heterogeneous groups) may be better than individuals at discerning the truth of the matter and thus would at least know what advice was most correct to give (on group decision making, for and against, see Thompson, 2004). But often the truth will be ambiguous. Furthermore, knowing the truth and disclosing the truth to others are two different matters. Perhaps groups are better at coming up with many rationales for being honest with their audience and will focus on their common decency and respect for rules of forthrightness; however, exactly how to follow the rules and/or how to be (sufficiently) decent may also remain ambiguous. And as the following argument shows, self-interest might ultimately win out.

Miller (1999) explains that norms of self-interest are so strong and so widely held that people often invent self-interested explanations post hoc for what otherwise seem to be altruistic acts. Thus, because self-interest may be one thing that members are most likely to have in common, arguments for acting selfishly are likely to come up in groups, especially when it is very clear to everyone what action best serves their self-interest. Worse yet, selfish arguments

tend to be relatively infectious once mentioned (Davis, 1992). When group norms of self-interest conflict with norms of honesty or forthrightness, it will be whichever norm is more likely to be accepted once voiced – i.e., which norm is more "demonstrable" (Laughlin, Bonner, & Miner, 2002; Thompson, 2004) – that wins out in the group, even if the majority of members are initially against it. Solutions to mathematical problems tend to be highly demonstrable, for example. Ethical arguments, however, are notoriously low in demonstrability, especially in the face of self-interested arguments to the contrary. Therefore, moral licensing may increase in groups if the arguments that provide license (and these arguments will be founded in self-interest) are particularly demonstrable. For example, once conflicts of interest are disclosed, the argument that "we followed the [letter of the] law and the audience was warned, so anything we say next is fair game" might be particularly persuasive in a group, especially if groups are prone to violate ethical norms or follow them in merely perfunctory ways.<sup>10</sup>

Research on pluralistic ignorance (Allport, 1933; Prentice & Miller, 1993) suggests that people can be hesitant to voice ethical concerns against other members of the group, much like a classroom of students can be afraid to ask questions to the teacher because each of them think (incorrectly) that everyone else understands the lecture. If several members of a group voice self-interested concerns, others may be less likely to propose or defend ethical concerns, even if many people in the group find ethical concerns privately compelling. Some advisors may privately see their role as one of being objective and informative to their audience, but they still

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<sup>10</sup> Eliot Spitzer has worried that stiffening up disclosure regulation in the U.S. has served to send some corporations to set up shop in the E.U., where regulations are more forgiving and less expensive to follow (Spitzer & O'Brien, 2004). Not only does this represent a loss to the American economy, but if American consumers still have access to the information these "European" firms generate, and if the European information is even worse than what would be generated under the old American laws, complying with the new American laws by circumvention would generate worse information at greater cost.

might not speak up against other advisors who are lining their own pockets.

*Resolving Conflict within Groups.* Even if everyone is encouraged to speak their minds, and even if every opinion is given equal weight, whether and how the group ultimately complies with some disclosure rule will depend on the individual judgments initially made and group processes that merge these judgments into a group decision. On difficult matters such as whether disclosure morally (or even strategically) justifies providing increasingly biased information, the group may turn to something akin to a majority vote (Kerr, MacCoun, & Kramer, 1996). Now, suppose that a majority of individual advisors, e.g., six out of every ten, will advocate what will here be called "disclosure distortion" (i.e., the effect of offering more biased advice when the advice is accompanied by disclosure). If you put 10 advisors into a group, and if these 10 settle their differences by majority rule, six advisors in favor of disclosure-distortion would always win out over four against. Thus, a 10-person group would vote to engage in disclosure distortion 100% of the time, as opposed to only the 60% expected when advisors acted individually. Thus, other group dynamics aside, it may only take a particular voting/coordination rule to result in groups being more likely than individuals to engage in questionable behavior.

Of course, the reverse would be true if only a minority of individual advisors endorsed disclosure distortion, *ceteris paribus*. Forming groups would then attenuate the questionable behavior, since groups would be less likely to majority-vote for disclosure distortion. This, at least so long as other group dynamics, (e.g., groupthink, conformity pressures, pluralistic ignorance, overconfidence, diffusion of responsibility, out-group discrimination, the demonstrability of self-interest, etc.) did not alter individual opinion on the way to the voting

booth. This possibility noted, a reanalysis of the data in study 1 shows that roughly 70% of advisors in the disclosure condition distorted their advice (i.e., gave advice that was over and above their own personal estimates) more than the average advisor did when the same incentives were left undisclosed. Although the data were collected with between-subject measures, this at least raises the possibility that a majority of individual advisors would vote for disclosure-distortion, thereby causing an even greater majority of groups to act this way.

*Anchoring in Groups.* As for how groups of information recipients will respond to disclosure, because groups focus on commonly held information, groups might be more likely to focus on the (disclosed) fact that the information was provided by someone with a conflict of interest, and thus might be more likely to think that they should discount the information provided. But, this makes the important presumption that the disclosure and its interpretation (and not merely the information that came with it) are commonly held. Furthermore, even if the group unanimously decides to "totally" discount the information, anchoring effects are very robust even to those who are aware that the anchor is totally irrelevant (e.g., if it is "randomly generated" as in Tversky & Kahneman, 1974). In fact, there is good reason to think that groups will be affected by the anchors given to them. If anchors work by making anchor-consistent knowledge selectively accessible in memory (Strack & Mussweiler, 1997), then to the extent that group members discuss the validity of the anchor, this selectively accessible information is also likely to be common among them and thus focused on in-group discussion, leading to group polarization toward the anchor (Moscovici & Zavalloni, 1969). Indeed, Rutledge (1993) found that groups anchor on information much in the same way as individuals do. While group-level anchoring effects will no doubt vary, it is clear from a practical standpoint that managers will

need to do more than merely ensure that "the group is aware of the risks" when it comes to dealing with questionable information. Groups often misuse good information (e.g., common but correct information: Wittenbaum & Park, 2001), let alone information disclosed as possibly corrupt.

*Future Study and Objections.* Future study can examine how groups actually engage these issues and provide experimenters with the opportunity to listen in on-group conversations about how to handle conflicts of interest and disclosure. Such conversations would provide experimenters with insight into the dynamics of disclosure at both the group and the individual level. While individuals might think differently when alone vs. in a group, hearing group members discuss what was on their minds would likely be enlightening for researchers interested in what occurs at the individual level.

Of course, groups may act quite differently than discussed above. For example, even if groups become more selfish than individuals, there will be situations in which they exhibit no more disclosure distortion than individuals. One such situation is wherever there are such strong selfish reasons for objectivity that disclosure distortion is not tempting even to an increasingly selfish group (but then, the conflict of interest is less strong in the first place, and the topic of disclosure is less pertinent). Additionally, perhaps wherever they can get away with it, increasingly selfish groups will offer maximally biased advice with or without disclosure, such that disclosure can do no further harm. Where disclosure is especially likely to be harmful, over and above the underlying conflict of interest, is ironically wherever there remain ethical norms, which govern the group so as to delicately keep bias at bay. For example, if norms such as "Consumer protection is job #1" usually keep expert advisors in check, it could be disclosure that

unbridles their self-interest. This could be exaggerated in groups if groups are relatively likely to figure out how to comply with norms in questionable ways (e.g., thinking that "Consumer protection is job #1, but now that we warned them, the consumers' protection is their own job").

Another possible failure of the above analysis of groups is that, since it follows the tradition of American social psychology, it may have made too much of the degenerate influence of the majority. Moscovici, famous in criticizing American social psychology for not giving sufficient credit to the power of vocal minorities, would probably agree. Moscovici and colleagues argue that if a minority creates social conflict and refuses to compromise with the majority, the majority can be swayed. This can occur if the minority: (1) attracts attention; (2) disrupts established norms so as to produce doubt in the majority; (3) demonstrates the existence of coherent alternatives; (4) seems confident, certain, and committed to their stand; and (5) makes it clear that disharmony can only be resolved if the majority compromises (e.g., Moscovici & Personnaz, 1980).

If a group member cannot change group behavior for the better, however, it may be best to leave the group (Badaracco, 2001): "People aren't very effective as thorns. Unless one can accept the situation or hope to change it, there is no point in sticking around." This raises the worry that, if ethical minorities select themselves out of the group, the group will become even more unethical, highlighting the need for managers to make it easy for ethical employees to take a minority stand on the issues. This also highlights the need to make doing the right thing demonstrably so even if only a minority of people are initially for doing it: When it comes to disclosure, the protection of consumers must not only be "job #1" it must demonstrably be "Our #1 job."



## **CHAPTER V**

### **POTENTIALLY MITIGATING FACTORS & UNANSWERED QUESTIONS**

In my studies, I found that conflicts of interest left estimators with worse estimates compared to estimators whose advisors had no conflict of interest. Furthermore, those receiving disclosures of conflicts of interest made significantly more error than estimators whose conflicts of interest were not disclosed, whether I assess this error by comparing estimators' actual payoffs across condition, or by comparing estimates to what "accurate" advisors generally thought, or by comparing estimates to what each estimator's own advisor thought. These results persisted over several rounds that provided both experience and feedback on performance. Disclosure is supposed to warn people about possible bias, bring scrutiny to bear on information, and suggest that one should place less weight on the advice. On all of these points, I have found that disclosure falls short. In fact, when it came to the bottom line (estimator payoffs) in my studies, disclosure made matters worse. Granted, my results will not generalize to all settings. They depend on a number of situational features that are likely to vary, such as the strength of the conflict of interest, the suspiciousness of the estimator, the nature of the disclosure, and whether advisors have any opportunity to exaggerate further once their conflicts are disclosed. It is, of course, possible for disclosure to benefit estimators. From context to context, whether disclosure does more harm than good depends on the balance between the discounting it stimulates compared with the disclosure distortion (disclosure's distorting effect on the advice given) it induces. Rather than show that disclosures always exacerbate the problems created by conflicts of interest, my goal has been to argue that disclosure cannot be assumed to always help.

Is it possible that disclosure might leave an audience better off in *some* situations? Yes, of course. Even if advice gets worse and discounting is insufficient (i.e., their discounting does not leave the audience where they would be had there been no conflict of interest), it is nevertheless possible that the increase in discounting more than offsets the increased bias in advice. For example, advice might be inflexible or already as bad as it can get, disclosure or no, so that any discounting cue will be ineffective at worst but likely to be at least marginally beneficial.

Disclosures may variously serve different functions (e.g., disclosing an independent certification of the claims made, acting as a product-warning label, or disclosing a conflict of interests); so how might each type of disclosure differently backfire or succeed? In this dissertation, I focused on a narrow (but common and important) form of disclosure, namely the disclosure of a conflict of interest. Other forms abound. For example, Sarbanes-Oxley and much of the prevailing literature on disclosure deal with such disclosures as: (accelerated) disclosure of quarterly and annual earnings reports, disclosure of transactions of company securities by company insiders, disclosure of rating agency decisions, disclosure of yet undisclosed obligations, disclosure of lock-out periods affecting employee stock-ownership plans, disclosure of Exchange Act reports upon being filed with SEC, and disclosure of specific information from the firm's annual report, such as Critical Accounting Policies, Financial Conditions, and Results of Operations. Which if any of these types of disclosure are prone to the same perverse effects as outlined in this dissertation?

It seems that all forms of disclosure might fail to do their job or make matters worse, so long as recipients can incorrectly react to the disclosure and providers can "react" as well. Consider, in abstract terms, the conditions required by the perverse effects that I showcased

above. (Condition 1) The advisors were *able* to provide even worse information compared to what they provided without disclosure, i.e., disclosure distortion was possible. Given the discretion in what corporate managers disclose, even today, this condition seems met in situations containing the above laundry-list of disclosures. (Condition 2) The advisors were *willing* to engage in disclosure distortion. The prevalence of what is known as "earnings management" implies that firms are willing to engage in similar corporate gymnastics. Recall that I hypothesized two main reasons for disclosure distortion: (2a) strategic exaggeration, and (2b) moral licensing. Moral licensing requires that corporate managers show some concern for their audience (in the undisclosed condition), and that this concern might falter (in the disclosed condition). Strategic exaggeration requires that the information providers think the disclosure will impact the audience (whether it does or not) and requires that the providers want to counteract this impact (either for selfish reasons, or even in the interest of the audience, or in the interest of some third party). These requirements are difficult to rule out regarding any sort of disclosure. And finally, (Condition 3) it is possible for the information recipients to use the disclosure inadequately or incorrectly, thus failing to counteract the deleterious effects of the conflict of interest or even of the disclosure itself (insufficient discounting).<sup>11</sup>

On the surface, it seems that the conditions for perverse effects of disclosure might hold in a variety of disclosure-domains. To examine this a bit deeper, I borrow from Boot and Thakor (2000), who categorize disclosures based on the heterogeneity of the information recipients, be they "informed" or relatively "uninformed." This allows the authors to distinguish three types of

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<sup>11</sup> Notice that, in the case of strategic exaggeration, when information providers distort information more than necessary to compensate for the discounting, this could be due to providers overestimating how much discounting will ensue or due to their intentionally overcompensating for the discounting, in order to provide a "cushion."

disclosure. One is disclosure of information that complements the information only available to informed investors ("to-be-processed complementary information"). The second is information that is orthogonal to the information attainable by any investor and thus complements the information of all investors ("preprocessed complementary information"). And the third is information that reveals to all what was previously known only by the informed ("substitute information"). The authors use these distinctions to make three main arguments. First, in equilibrium, all types of firms voluntarily disclose all three types of information. Second, in contrast to the existing literature, they find that disclosure of complementary information strengthens investors' private incentives to acquire information on the disclosing firm. Substitute information disclosure weakens incentives for private-information acquisition. And, third, while it is unclear what effect disclosure of complementary information has on incentives for financial innovation, disclosure of substitute information weakens those incentives.

One take-away of the Boot and Thakor framework is that the preconditions of disclosure's perverse effects might interact with the three types of disclosure outlined above. After all, even if disclosure is a good thing *on average*, it might harm heterogeneous subgroups of recipients in predictably heterogeneous ways. For example, a corporation might alter its behavior (as in strategic exaggeration, the firm might release more glowing quarterly reports than they otherwise would) mostly to compensate for how large groups of institutional investors will react to a given disclosure. And while institutional investors might take all of this into account, this "compensation" may adversely affect the uninformed investor who reacts in quite a different way

to the disclosure. These are empirical questions for which I lack evidence, so I will move on to address questions of boundary conditions for the effects of disclosing *conflicts of interest*.

### **Potentially Moderating and Mitigating Factors**

*Upfront Disclosures.* The nature of the disclosure is sure to impact its efficacy. Bold, up front disclosures are reasonably more likely to protect the audience from misleading information than disclosures buried in the fine print legalese. For example, it is often easier to keep an anchor from setting than to unhook it once set, and likewise easier for listeners to avoid the impact of misleading information if they are forewarned, rather than trying to ignore misleading information once it has been assimilated (Weaver-Lariscy & Tinkham, 1999). In the two main studies presented here, the disclosures always came *after* the advice-anchors. Other possible complaints about my disclosures (e.g., those from discussions with Robyn Dawes) are that I should have also tested disclosures that warn that the advice is too *low* (so as to run against a general tendency to enjoy hype). As explained earlier, however, I did run an earlier study (with Don Moore, involving suggested answers to trivia questions) where the disclosure was up front and declared the advice to be biased 1) high, 2) low, 3) randomly, or 4) "one way or another". I found significant anchoring across all conditions.

*Voluntary Disclosure.* Another objection to my findings (also from discussions with Robyn Dawes) is that it is not clear *who required the disclosure* when the disclosures say, "I am required to tell you that..." But, there may be problems with even disclosures known as voluntarily made. As argued early in Chapter II (citing Mercer, 2005), it is possible that disclosures will increase trust in the person giving the advice, especially if the person with the conflict of interest is the one who "warns" the estimator about that conflict. Consider, for

example, the doctor who points out that she is part owner of the clinic to which she refers her patients. Patients might then think (perhaps rightly) that the doctor is going out of her way to be candid when she discloses her conflicts of interest. Insofar as disclosure demonstrates advisor honesty, such assurance might actually *reduce* scrutiny rather than increase it. This would open the patient to exploitation; and this might occur even if exploitation is unintentional on the doctor's part. Future research should examine different types of disclosures (such as those offered by the advisor or offered by someone else) and how they effect attributions on the advisor's motivations as well as the impact on discounting.

*Greater Incentives.* Another possible mitigating factor is the stakes involved. One could object that my laboratory experiments have overstated the ability of conflicts of interest to bias advice because of the minimal incentives involved. In market settings, the incentives to offer accurate advice are great: establishing trust, building long-term relationships with clients, maintaining a reputation as an expert advisor, keeping one's job, and even staying out of jail, all might well depend on giving accurate advice; and it does seem intuitively plausible that if the stakes are large enough, people will make fewer errors. But there is little supporting evidence for the hypothesis that financial incentives can eliminate either reliance on cognitive heuristics or the biases they produce (Thaler, 1991). Camerer and Hogarth (1999) report that the magnitude of incentives usually has no effect on average performance (though higher incentives can reduce variance) and note that "no replicated study has made rationality violations disappear purely by raising incentives." Certainly, even in the real world, with lots of money at stake, people have been consistently shown to exhibit many of the biases found in the lab (Camerer, 2000).

Even if the magnitude of incentives is a concern, material incentives to distort information are also commensurately greater for actual professionals than they were for any of the participants in the laboratory experiments discussed here. For example, when an increase in the company's stock can mean that the CEO's stock options are worth millions of dollars more, even the most honest executive is likely to see the value in making the firm's performance appear as good as possible.

*Feedback.* Feedback might be another factor that would help people deal with the sorts of biases described here. If an audience can be biased by bad advice, repeated experience might alleviate this effect. After all, feedback from past errors could serve to correct future decisions (Hogarth, 1981). Serious doubts have been raised about the efficacy of feedback in correcting decision errors (Brehmer, 1980; Castellan, 1977; Einhorn, 1980; Einhorn & Hogarth, 1978). In my research (Cain, Loewenstein, & Moore, 2005, 2006), I find that bias persists even in the face of several rounds of feedback. Some research has even suggested the distressing possibility that feedback can exacerbate bias in some situations (Abelson & Levi, 1985). And, to the extent that advisors exaggerate their advice strategically, feedback may help them improve the influence of their advice: while estimators become more sophisticated, so might the advisor who wishes to manipulate them. The feedback results in COINS are suggestive of this, as the perverse effects (e.g., lower estimator payoffs, higher advisor payoffs) seemed headed in even worse directions during feedback rounds.

Even if experienced audiences can properly use disclosures and are not outsmarted by experienced advisors who wish to manipulate these audiences, there are many important decisions that are made by naïve audiences. Indeed, some of the most important decisions we

make in our lives (e.g., for our medical care, our home purchases, etc.) we make but a handful of times. If conflicts of interest lurk in these domains, disclosure may be unlikely to protect us. We can learn quickly that some advice is to be ignored ("The advice was randomly generated..."), but it takes longer to learn just how much impact that advice is having on us, even when we think we are "ignoring it completely."

Feedback might work if it allows the audience to be clear that their advisor was intentionally lying to them. Koch and Schmidt (2006) use a controlled laboratory experiment to replicate our finding that disclosure can have perverse effects. However, they find that these results revert as subjects gain experience and find that auditors give less biased advice with disclosure. They argue that disclosure of conflict of interest can even improve auditor independence by fostering fairness (though, they find that disclosure of conflict of interests disturbs reputation building). The difference between their experiments and those I have conducted is that the advisors did not have any uncertainty about the correct values in question, and what advisors knew was to be disclosed at the end of each round. This rules out any room for "optimistic bias" on advisors' parts and ensures that lies will be discovered. This is not externally realistic in many situations where experts can maintain that they made an "honest mistake." It does suggest, however, that disclosure might be helpful when it alerts the audience to identifiable and intentional corruption.

*Source Neglect.* In addition to the group dynamics discussed in the previous chapter, one final consideration is how reliance on biased advice might be influenced when that advice is passed along by the original audience to a secondary audience. Unless the disclosure is also repeated to the secondary audience, their ability to discount the advice will be greatly



compromised and disclosure will already have added further bias to the advice. Gilovich (1987) has shown that those who receive advice secondhand come to more extreme conclusions than do their first generation counterparts. The mass media's reporting of scientific studies exemplifies this problem: The headlines convey bold claims and expectations, often without clarifying the caveats and careful qualifications made by the original researchers. So, even if the initial qualifications might have led to some discounting, what is passed on are unqualified claims and headlines. As accounts are retold, getting farther from the source, whatever distortions have been introduced become less likely to be corrected, even insufficiently. Again, the point is that, once bad information leaks out, a lot can go awry despite every initial warning.

### **Future Research**

*Moral Licensing.* This dissertation leaves several interesting questions unanswered. Recall that Monin & Miller (2001) show that demonstrating one's egalitarianism licenses subsequent discrimination. Likewise, I have suggested that disclosure can morally license subsequent exaggeration. But all of this leaves open the question of when prior acts *license* unethical behavior rather than *prime* subsequent ethical acts. This is a puzzle that I am actively pursuing in my current research (on my own, in research with Jason Dana and Robyn Dawes, in research with Chenbo Zhong and Katie Liljenquist, and in discussions with Sendhil Mullainathan and Todd Rodgers).

A cynical view (one that I am pursuing) is that people care more about *appearing* moral than about being moral. So, if one can say something racist but get a pass because of an egalitarian image earned by prior action, all the better. In fact, people might not care about being or even appearing moral except for not violating other people's expectations. For example,

consider the conflicted advisors who might restrain themselves—i.e., be somewhat honest—when facing an audience that expects good advice, but who might also show less restraint if their audiences' expectations were lowered by disclosure. To follow up on this notion, I teamed up with Jason Dana to pursue research on fairness and other-regarding preferences (e.g., Dana, Cain, & Dawes, 2006). Our research teases apart some misconceptions about fairness concerns and other-regarding. We introduced several lab experiments in which people charitably and anonymously gave to others in a one-shot situation (apparently showing concerns for others' welfare), but then many of these givers reneged when doing so could not be discovered by the would-be recipients. Our metaphor is of someone who willingly gives when confronted by an expectant beggar (apparently showing concern for the beggar's welfare), but who also prefers to secretly cross the street to avoid the beggar (and his expectations) entirely. We characterize many fairness concerns as a preference to conform to others' expectations rather than—as predominant social preferences models assume—as a preference for fair or beneficent outcomes, *per se*. Accordingly, our model predicts that otherwise generous people may exploit uncertainty about the situation to lower a potential recipient's expectations of a gift and thereby be more selfish.

Along with my disclosure research, this work shows the extent to which expectations of even anonymous others can restrain selfish behavior; it also shows the lengths to which people will go to lower these expectations. Follow-ups are in the works, including (1) an economic model, (2) field experiments aimed at using these insights to increase charitable giving, and potentially (3) a neuroeconomic study of this behavior. Perhaps if disclosure ever *increased*

expectations of getting good advice (e.g., if experimentally conflicted advisors were falsely disclosed as having aligned interests), it would lead to better behavior and better advice.

*Markets for Advice.* Secondly, how would an audience of estimators do in a market of advice, with more than one advisor to choose from? A neoclassical economist might assume that market settings would wipe away my effects. I hope this suggestion is correct, for consumers' sake, but I am pessimistic for five reasons: (1) As we see in the literature on behavioral finance (e.g., Schliefer, 2000), many biases persist in market settings, and the anchoring effect (on which rest many of the biases which I have documented) is among the most robust effect in the literature on biases. (2) Real markets for advice are not ideal markets and are not frictionless, so, for example, getting a second opinion from a medical specialist sometimes involves considerable headache and travel, tempting several patients to take the advice first given to them, disclosed as biased or not. (3) The initial anchor may continue to impact a person's judgment, even after they encounter unbiased second-opinions. (4) Even with access to multitudes of advice, the uncertainty involved in assessing advice might allow for a market for lemons (Akerlof, 1970) where the lemons are bad pieces of advice; even if buyers are cautious when on "the used-car lots" of advice, consumer uncertainty allows bad advice to still be sold to unlucky consumers. And, in the presence of a market for advisors, conflicted experts (e.g., Jack Grubman types) are still likely to hold some attraction over un-conflicted non-experts, even if they do not ultimately offer objectively better advice. (5) Even if market mechanisms teach audiences to properly discount or ignore advice disclosed as biased, it will not be a total success for disclosure if it has also made the advice worse and eroded the professional ties of ethics and caring (say, via moral

licensing). If formal rules offset informal honesty, it is no victory for the audience who learns to disregard what the rules have helped make into useless advice.

*Disclosing a Burden.* Thirdly, there is the possibility that advisors who disclose an interest in a particular outcome may place a burden on their audience by making them feel that they ought to oblige this interest, even at their own expense. Prior research (e.g., Dana, Cain, & Dawes, 2006; Cain & Dana, 2006) shows that people often make sacrifices towards expectant others, so long as the expectations meet certain criteria (e.g., are common knowledge, reasonable, etc.). So, for example, if a doctor discloses that she has an interest and/or expectation regarding the patient's choice, the doctor's disclosure may put the doctor into a kind of expectant "receiver" role. The patient may be placed in the uncomfortable and perverse role of aiding the doctor, as if being expected to give to someone who expects his help. I mean, if my doctor discloses that she gets \$5000.00 if I enroll in her medical study, the disclosure suggests how important it is (for her wallet, for her career, and perhaps for science) for me to oblige. Furthermore, once a doctor's conflict of interest is disclosed, patients may increasingly worry about how it looks to go against the doctor's advice: Not only does the patient seem to doubt the doctor's expertise when advice is refused, but (when a moral hazard is disclosed) perhaps refusal will appear as doubting the doctor's integrity as well. These are questions my colleagues and I are attempting to address (e.g., in Cain, Loewenstein, Moore, Schoen, 2005).

*Taking Responsibility.* Finally, how do we encourage advisors to take responsibility for consumer protection? The ultimate goal of regulating the disclosure of conflicts of interest is often to create institutional arrangements that lead people to behave responsibly and to "play fair." On this problem, Healy (2002) writes, "Well-functioning institutions are not easy to build.

The key problem is getting people to be responsible, and responsibility means being willing to take ownership of a problem... disclosure [often has] the effect of detaching the problem of honesty and bias from anybody in particular." Disclosure rules often make people feel that the outcome of one's behavior, so long as behavior is minimally compliant, is the responsibility of the regulators: "Hey, I do not make up the rules around here, I just follow them." And for those who actually make the rules, the *regulators* may see disclosure as absolving them of responsibility for protecting consumers by (allegedly) empowering consumers to protect themselves.

If "high-quality" compliance with rules is fundamentally about taking responsibility, then groups may be less inclined than individuals to engage in it.<sup>12</sup> Since the 1964 murder of Kitty Genovese in New York, researchers have repeatedly documented "diffusion of responsibility" in groups. In the Genovese case, no one came to her assistance or even alerted the police even though her screams for help were heard by approximately 40 of her neighbors. Kitty initially fought off her attacker, but he returned minutes later and continued stabbing her to death over a prolonged period of time. Supposedly each of the neighbors assumed that somebody else called the police, but no one did. The basic problem for group responsibility is reflected in a well-known parable by an unknown author: "Once upon a time, there were four people whose names were Everybody, Somebody, Nobody, and Anybody. Whenever there was an important job to be done, Everybody was sure that Somebody would do it. Anybody could have done it, but Nobody did it. When Nobody did it, Everybody got angry because it was Everybody's job. Everybody thought that Somebody would do it, but Nobody realized that Nobody would do it. So

consequently Everybody blamed Somebody when Nobody did what Anybody could have done." Likewise, if disclosure reduces the feeling of responsibility toward one's audience, the presence of others (e.g., other advisors who could ostensibly provide unbiased "second opinions" or, regulators who could ensure that conflicts of interest were dissolved rather than merely disclosed) may further diffuse the responsibility to give honest and unbiased advice in the first place.

On the difficult task of making the informed take responsibility for the uninformed, Heimer (2004) makes some generalizations, saying that rules are especially likely to be unproductive when: (1) they are formulated by distant external bodies who are obligated to achieve only narrow goals rather than to consider the overall welfare of the system; (2) when the rules are highly visible ceremonial responses that will be judged by groups who are only episodically attentive to the conditions the rules are intended to address; (3) when the rules are designed around extreme circumstances but applied to less extreme ones; (4) when rules are based on records that were intended for another purpose or can easily be distorted by interested parties; and (5) and when rules to discourage wrongdoing are conflated with rules to encourage high-quality performance. The core point is that responsibility is about moral competence, and rule systems that aim at responsibility rather than mere accountability must promote high standards and a sense of obligation to a larger group (Heimer, 2004); but how to do that remains to be seen.

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<sup>12</sup> For present purposes, the quality of compliance ("high/low") refers to the type of compliance had (in letter and spirit, or in letter alone). This opens up the possibility for notions such as "full, but low-quality" compliance as well as high-quality violations, the latter presumably being violations of the letter of the law that further its spirit

## Summary and Conclusions

*Just a few Bad Apples?* Those who advocate disclosure have relied on both lay psychological theory and economic models (e.g., Crawford & Sobel, 1982) which assume that disclosures allow advice to be appropriately discounted. I have cataloged a body of research which casts doubt onto this assumption. Furthermore, advocates of disclosure do not usually consider the potential influence that the disclosure has on the *transmission* of information, while I have found that disclosures can further bias advice. The reader might object that these findings overestimate the effect, thinking that most working professionals are experts in managing conflicts of interest. And professions such as medicine, law, and accounting maintain high ethical standards (including rules on conflict of interest) which ought to alleviate the effects of conflicts of interest. For example, Gary Shamis, a leading figure within the American Institute of Certified Public Accountants, testified before the SEC, "We are professionals that follow our code of ethics and practice by the highest moral standards. We would never be influenced by our own personal financial well-being versus our professional ethics" (Shamis, 2000). Similarly, the Code of Ethics of the American Medical Association (2002) states, "Under no circumstances may physicians place their own financial interests above the welfare of their patients." It would be nice to believe that writing down ethical guidelines and relying on the virtue of professionals is enough, but recent business scandals leave us doubtful. I do not see it as my burden to prove that conflicts of interest are a real and present danger in the professions; I take this as a starting assumption.

It is not that I think that the professions are wildly corrupt. My colleagues and I have challenged the assumption that intentional corruption explains the effects of conflicts of interest

on advice (Moore, Cain, Loewenstein, & Bazerman, 2005). The problem has less to do with outright and intentional corruption than with unconscious bias (Bazerman et al., 2002; Dana & Loewenstein, 2003; Kunda, 1990). Conflicts of interest can sway even the most honest advisors. Humans tend to be very good at justifying why self-serving behavior is fair, and experts can believe that they are giving objective, sound advice, even while they are giving advice that aligns more closely with their incentives than with the truth (Messick & Sentis, 1979; Moore, Loewenstein, Tanlu, & Bazerman, 2003). As Francis Bacon said, "Man prefers to believe what he prefers to be true."

I do not mean that we are unconstrained by objective evidence or the need to construct an argument that might persuade the dispassionate observer. The problem, as Kunda (1990, p. 10) describes it, is that "people do not realize that the [decision] process is biased by their goals, that they are only accessing a subset of their relevant knowledge, that they would probably access different beliefs and [decision] rules in the presence of different goals, and that they might even be capable of justifying opposite conclusions on different occasions." Self-interest affects the way that people search for information, encode that information in memory, and evaluate evidence (Gilovich, 1983; Kunda, 1987, 1990). Self-interest can influence judgment at each stage, and this influence often operates outside of conscious awareness (Moore & Loewenstein, 2004). Indeed, even when people try to step out of their partisan roles in order to predict what an unbiased and objective outside party would see as right, their judgments are biased by their own self-interest (Babcock, Loewenstein, Issacharoff, & Camerer, 1995; Moore, Loewenstein, Tanlu, & Bazerman, 2003). Because they are not aware of the ways in which self-interest biases their judgment, it is difficult for people to undo the influence of their own self-interest. The absence



of such awareness can lead even experts to believe that they are being neutral and unbiased, when in fact they are giving advice that is biased and self-serving (Dana & Loewenstein, 2003). As a consequence, trying hard to be good (or wanting to adhere to high ethical principles; see: Cain, 2006) may not be enough to achieve ethical behavior or unbiased advice.

Another way that people can be blind to their own unethical behavior is by falling slowly but steadily down a slippery slope. As disclosure regulation goes through innumerable changes, and as advisors get more and more used to giving biased advice, experts might find themselves engaging in out and out corruption without noticing their own transition out of the grey areas.

*Explaining Disclosure's Popularity.* Finally, if disclosure is so problematic, why is it so popular? One plausible explanation for disclosure's popularity is that most people are not aware of disclosure's pitfalls; on the face of it, disclosure seems like a sensible remedy to a situation in which one party possesses an otherwise hidden incentive to mislead another party. A more cynical explanation would play on the "Chicago Theory of Regulation" (Stigler, 1971; Peltzman, 1976; Becker, 1983) which posits that regulation typically exists not for the general benefit of society but for the benefit of special interest groups – often the regulated themselves. Applied to disclosure, such a theory would posit that both regulators and the regulated are well aware of the ineffectiveness of disclosure as a remedy for the problems caused by conflicts of interest, and that they advocate disclosure because it benefits them in some way.

Thus, although *consumers* may believe that disclosure protects them, for *the regulated*, disclosure may represent a real benefit. Advisors will often see disclosure as the lesser of two evils compared to actually having to eliminate the conflicts of interest in question. For example, pharmaceutical firms are often strong proponents of disclosure laws, since it is better for them

(and for researchers who receive their funding) if researchers must *disclose* financial ties to industry rather than actually having to sever those ties. Furthermore, disclosure can protect biased information providers. For example, even though consumer advocates fought hard for warning labels on cigarette packages, since the labels first appeared, the tobacco industry has defended itself against litigation by citing the warning labels as evidence that consumers were told the risks. "What was intended as a burden on tobacco became a shield instead" (Action on Smoking and Health, 2001).

Then there are the prohibitive costs of actually fixing the problem. Eliminating (rather than merely disclosing) conflicts of interest would sometimes require substantial changes to institutional arrangements. Reducing conflicts of interest in political campaign finance might mean, for instance, the prohibition of political contributions by non-constituents, including non-voting entities such as corporations and unions. Reducing conflicts of interest in physicians' treatment recommendations might mean that patients always receive their diagnoses and treatments from different people, so as to minimize the risk that a doctor could recommend treatment because it would produce income. At the least, it might mean that doctors could not receive golf trips and "free" samples from pharmaceutical firms, nor could they receive thousands of dollars per person enrolled into experimental studies, as doctors do today (Dana & Loewenstein, 2003). In some cases, these changes will represent wise policy that improves the aggregate welfare. This is because the benefits to the masses of patients, investors, or consumers may outweigh the costs to the physicians, stockbrokers, or agents. In other cases, however, the benefits of introducing such institutional change may not offset the costs. Congress eventually barred firms from providing auditing and consulting services to the same client, but only after a

prolonged fight with regulators during which accounting firms insisted that disclosure would be adequate.

Disclosure may be seen as beneficial in its own right – contributing to an airing of 'dirty laundry' and a leveling of the information disparities that often exist between parties. If the goal is to eliminate the problems caused by conflicts of interest, however, our research suggests that mere disclosure is unlikely to be an effective solution. Disclosure, it seems, *promises* something for everyone. Disclosure promises minimal disruption from the status quo; it does not require professionals who face conflicts of interest to sever financial relationships or change how they get paid. To regulators and policy makers, disclosure absolves them of some of their responsibility to limit market exploitation by transferring to consumers the responsibility of looking out for themselves: "caveat emptor." And to consumers of information and advice, disclosures promise to help consumers look out for their own interests. But, as this dissertation has shown, such promises are often not worth the paper they are fine-printed on.

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