

**Reducing Bounded Ethicality:  
How to Help Individuals Notice and Avoid Unethical Behavior**

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## Executive Summary

Research on ethics has focused on the factors that help individuals act ethically when they are tempted to cheat. However, we know little about how best to help individuals notice unethical behaviors in others and in themselves. This paper identifies a solution: instilling a mindset of vigilance. In an experiment, individuals playing the role of financial advisers recommended one of four possible investments to their clients. Unbeknown to these advisers, one of the funds under consideration was actually a fraudulent feeder fund of Madoff Investment Securities. Results from this empirical study demonstrate that instilling vigilance by asking individuals to indicate their suspicions prior to making a decision was critical to helping them notice fraudulent behavior and act on that information. In contrast, committing to a decision prior to contemplating suspicions precluded individuals from subsequently integrating critical information about the fund's fraudulent activity. We extend these findings to other interventions aimed to help managers notice unethical behavior.

## **Introduction**

Following the collapse of the world's largest Ponzi scheme in 2008, individual and institutional clients of Bernard L. Madoff Investment Securities lost an estimated \$65 billion in unrealized gains. In hindsight, investors detected major alarm bells that signaled Madoff's returns were too good to be true: they were impossibly steady and high at 11% per year, never experiencing a down year, and were consistently higher than those of the S&P 500 index with surprisingly little volatility. Madoff employed a small, three-person auditing firm that had only one active principal accountant; the other principal was an 80-year-old retired accountant living in Florida. He was extremely secretive about his investment strategy and selective about who could invest in his funds. Despite these telltale signs of fraudulent behavior, Madoff's Ponzi scheme was not uncovered for more than a decade, a fact that surprised even Madoff himself. Although a few investors noticed Madoff's funds seemed "too good to be true," many investors, including those with extensive knowledge of finance, were either completely blindsided or failed to act on their suspicions.

Behind the scandal were two groups of individuals who contributed to the growth of the Ponzi scheme: 1) the perpetrators who knowingly committed unethical acts, including those at Madoff Investment Securities who created fraudulent records of nonexistent transactions, and 2) the financial investors, advisers, and regulators who had the financial expertise and fiduciary responsibility to detect fraudulent behavior but failed to do so. This research focuses on the latter group of individuals, many of whom advised their clients to invest in Madoff's funds or invested themselves in the funds without awareness of the unethical nature of the funds. We seek to understand the factors that help individuals notice unethical behavior and act on their suspicions.

In particular, we investigate how activating a mindset of vigilance prior to making decisions is a critical first step to noticing unethical behavior in the environment.

### **Overview of Ethics Research**

Large-scale scandals including Madoff, Enron, and Worldcom typically have a few “bad apples” at the core but are enabled by a larger group of individuals who fail to notice and act when they have access to strong hints of wrongdoing. These types of scandals motivated organizational scholars to shift their focus from examining unethical acts committed with intention to do harm to investigations of how individuals, who intend to do good, are ultimately tempted to act unethically. These unethical acts can be categorized as either intentional (i.e., individuals are cognizant of their ethical violations) or unintentional (i.e., individuals are unaware their actions cross ethical boundaries).

In the domain of intentional ethical behaviors, the study of behavioral ethics—or the systematic and predictable ways in which individuals fail to act ethically—demonstrates that although there are individual differences in people’s moral identity and ethical values, morality within an individual is also malleable. Based on Nisan’s moral balance model, individuals have a moral “bank account” in which good deeds raise the balance and bad deeds lower it. Perceptions of surplus in the moral account could lead individuals to cheat whereas perceptions of a low balance might lead individuals to act more ethically.

Rest’s classic model of unethical behavior suggests that once an issue has been identified as a moral one, individuals engage in moral judgment (i.e., deciding whether something is ethical or unethical), moral intention (i.e., planning to act either ethically or unethically), and also moral behavior (i.e., acting either ethically or unethically). Behavioral ethics research has shown that individuals’ judgments, intentions, and behaviors depend on the situational and social forces in

the environment. For example, individuals are more prone to cheating when they feel cognitively depleted and can easily justify their behaviors. Because people often look to others to determine acceptable norms, individuals are also more likely to cheat when they see others cheating.

Based on this research, scholars have begun to investigate tools that increase the desire to act ethically and reduce the temptation to cheat. In a series of experiments, Kern and Chugh found that when individuals approached tasks with a gain frame (for example, with a 25% chance of gaining an acquisition), they were less likely to use insider information and lie to others relative to those who approached the task with a loss frame (with a 75% chance of losing the acquisition). These findings demonstrate that simply shifting individuals to a gain, as opposed to loss, mindset reduced individuals' propensity to cheat. Furthermore, research findings indicate that when individuals are assigned excessively difficult and specific goals, they are more likely to feel depleted, lie about their performance, or commit fraudulent acts to artificially boost their performance. These findings suggest that organizations might decrease intentional unethical behavior by defining their goals more broadly and by setting goals at levels that are perceived as fair and relatively attainable by employees.

### **Bounded ethicality and bounded awareness**

Parallel to this stream of research investigating the factors that influence individuals to engage in *intentional* acts of cheating is another body of research that studies how individuals engage in *unintentional* acts of cheating. These behaviors also fall under the broader category of bounded awareness, a state in which we systematically fail to notice relevant information that falls outside our attention when making decisions. In the domain of ethics, individuals exhibit bounded ethicality, making unethical decisions that are outside of their own awareness and are inconsistent with their consciously held ethical values.

Bounded ethicality operates at an unconscious level: individuals are not aware of how the biases that arise from their limited capacity to notice key information influences their judgments. Examples of bounded ethicality include implicit prejudice and conflicts of interest. First, even individuals who espouse equality and diversity might discriminate based on gender or race without their awareness. Such implicit biases stem from stereotypical associations that even individuals who consciously strive to be unbiased have difficulty overcoming. Second, conflicts of interest can operate outside of individuals' awareness. Auditors may exhibit bounded ethicality when they fail to recognize how the promise of becoming a future employer for the audited firm precludes them from making impartial audits.

Because these biases operate at an implicit level, interventions aimed at addressing intentional acts of cheating do not necessarily apply to cases of bounded ethicality. Therefore, scholars have developed interventions aimed at mitigating them. For example, recent research has demonstrated that employers evaluating candidates separately exhibited a gender bias: they were more prone to hiring men for math-related tasks and women for verbal-oriented tasks even when gender did not predict performance on these tasks. In contrast, Bohnet and colleagues found that evaluating male and female candidates jointly rather than separately eliminated reliance on gender stereotypes in hiring decisions.

Whereas past research has aimed to reduce bounded ethicality that manifests as implicit biases, we investigate factors that may help individuals notice when options that appear attractive at first are in fact “too good to be true” and unethical. Recent research has demonstrated that individuals who are assigned specific goals are less likely to notice relevant information in uncertain and ambiguous environments; in such environments, specific goals increase the tendency to inappropriately “satisfice” (i.e., to stop searching for information prematurely) and

excessively narrow attention. For example, in a financial decision-making context, individuals who were given specific performance targets (e.g., try to reach a 12% return over the investment horizon) were more likely to overlook important information about the future performance of investment alternatives and excessively focus on past performance data. Similarly, in a study of unethical behavior in academic research, scholars found that specific performance targets (e.g., reaching a statistical significance at  $p < .05$  level) led individuals to overlook or ignore data or analyses that did not allow them to reach their performance goals. Once again, these findings suggest that less strict and specific performance goals might prompt individuals to focus their attention and efforts more broadly and decrease unethical behavior.

In this paper, we seek to understand whether simply putting individuals in a mindset of vigilance prior to making a decision would lead them to attend to more information that challenges the viability of seemingly attractive options. Research on inattention blindness suggest that preparing individuals' attention for a certain type of information or data significantly increases their chances of noticing that type of information. For example, when signs warning drivers about the presence of bicyclists on the road are present, drivers become more likely to notice bicyclists, a change that improves the safety of everyone on the road. Because people have a natural tendency to look for information that confirms their beliefs, we are particularly ill-positioned to notice signs of possible fraud in situations where unethical options at first appear to be the most attractive. Thus, putting individuals in a vigilance mindset might encourage them to find important disconfirming information about the ethical nature of these options that are "too good to be true."

Furthermore, the timing in which individuals adopt a mindset of vigilance may be critical to helping them notice the risk for unethical behavior and act more ethically. A field study at an

automobile company found that drivers more honestly reported their car mileage when they signed an ethics code of conduct at the top of the mileage form (prior to making a decision that gave them the opportunity to cheat) rather than at the bottom (after the decision had already been made). Just as raising the salience of morality at the appropriate moment reduced dishonesty in this field context, raising suspicions prior to making evaluations may help individuals notice traps and act on that information. However, raising suspicions after individuals have already formed their decisions may reduce the propensity for individuals to notice even when they are faced with the same red flags. Taken together, we demonstrate that individuals' mental approach toward problems and the timing of that approach is critical to encouraging more ethical behavior.

### **Experimental Study**

To help us understand how creating a vigilance mindset helps individuals notice unethical behavior in the environment and act on critical information, participants in an experiment played the role of a financial adviser in an investment game. Advisers were asked to select one fund to recommend to a hypothetical client from a pool of four funds (see Figure 1 for the returns for the four funds relative to the S&P 500).

Unbeknown to our participants, the fund with the most attractive risk-return profile—Fortitude Investments—was based on data from Madoff's feeder fund. In addition to these graphs, individuals could also read the fund print that contained important information about each fund. For the disguised Madoff feeder fund, the additional facts informed advisers that the fund was exclusive to investors with strong relations to the fund, opaque on disclosing its investment strategy, and maintained unconventional auditing practices. Participants who ignored this information and selected Fortitude Investments lost all of their clients' money at the end of the four-year investment period (see Figure 2).

What percentage of individuals selected Madoff's feeder fund for their clients despite having access to critical information about the fraudulent nature of the fund? The answer to this question depends on whether individuals selected the fund that appeared most suspicious to them *before* or *after* they made their decision for their client. Those who made an investment decision for their client before contemplating their suspicions selected Madoff's feeder fund 68% of the time, whereas those who made their financial decision after determining which fund was the most suspicious to them selected the fund 51% of the time (See Appendix for more details about the experiment). In other words, instilling a mindset of vigilance—by merely asking individuals to identify the fund that was most suspicious to them—prior to making an investment decision reduced the propensity of selecting Madoff's feeder fund by 17 percentage points. The timing of vigilance was critical to helping individuals notice fraudulent behavior and act on their suspicions: once individuals have already made a decision, they may be less likely to consider disconfirming evidence and notice critical information.

Moreover, the timing of vigilance also impacted how individuals interpreted the critical information in front of them. The same question about suspicion, when asked after—rather than before—individuals had made a recommendation to their client was less effective in helping them incorporate relevant and highly accessible information regarding the unethical behavior of others. When asked about their suspicions first, 48% considered Madoff's feeder fund as the most suspicious, but when asked about their suspicions after making an investment decision, that proportion dropped to 33%. Prior to committing to a decision, individuals were more open to digesting all relevant data on the decision alternatives and potentially fraudulent behavior of others; by contrast, after their decision had been made, individuals were more prone to ignoring information about the unethical behavior of others, especially when this information was

presented alongside other favorable data about the fund's attractive returns. In other words, commitment to a decision made them less likely to attend to ethically relevant information.

### **Applications to management**

Failure to notice unethical behavior is a significant problem in organizations and in society more broadly. The widespread and devastating impact of Madoff's Ponzi scheme on individual and institutional investors underscores the cost of individuals' failure to notice. Given the prevalence of bounded awareness and bounded ethicality across organizational contexts, our findings highlight the value of raising vigilance in helping individuals consider reasons *not* to take a course of action prior to searching for reasons that affirm their reasoning. Simply asking individuals to contemplate which investment they were more suspicious about led them to attend more to the available and relevant information about unethical acts of others. As a result, the intervention decreased the proportion of individuals recommending Madoff's funds to their clients from 68% to 51%.

Although increasing vigilance prior to making a decision decreased individuals' propensity to select Madoff's fund, more than half of the individuals in the intervention group still recommended Madoff's investments. Beyond vigilance, what are other tools that managers can implement in order to notice unethical behavior in organizations? The following contain tools that, along with vigilance, can help individuals avoid making unethical decisions without their awareness.

**Ask questions.** Adopting an inquisitive mindset by asking tough and smart questions can help individuals assess whether the decisions they are about to make are "too good to be true." Although the idea of asking questions seems obvious, many individuals fail to realize that they can obtain more information than what is in front of them. In a classroom simulation where

requesting for more information is critical to making a better decision, MBA and executive students rarely seek additional information—not because information gathering is difficult, but because it simply does not occur to them that asking for more information is even an option.

**Triangulate on the focal issue with multiple questions.** For example, imagine that you are concerned that a supplier you are considering for your company is using child labor. Directly asking questions like “Do you use child labor?” is unlikely to be effective. However, asking multiple questions can help you triangulate whether the supplier is violating child labor laws. Questions like, “Can you break down the cost of materials and labor for me?” “How many of these products do you manufacture in a day?” “How long does it take each worker to produce the product?” “How many part-time and full-time employees do you hire?” “Can you provide demographics of your workers?” and “Can you tell me how you manufacture these products?” may elicit telling responses about whether suspicion is needed. You may realize that it is impossible for all of the workers provided in their figures to produce all of products manufactured, suggesting under-reporting of the number of employees.

**Triangulate on the focal issue with multiple sources.** Sometimes investigating one source or asking one individual is not necessarily enough as judging the validity based on one individuals’ response is difficult. If asking multiple questions to one individual does not triangulate on the problem, consider asking multiple sources the same question. Are these answers congruent with one another, or do they conflict? For example, consider the scenario that you are concerned a supplier is using child labor. If multiple sources reveal conflicting numbers about the number of employees working at the company, then you have reasons to be more suspicious. Inconsistency is often a sign that additional suspicion is warranted.

**Assess reasonableness of information provided.** Assessing the quality of the information and whether the information warrants additional suspicion also requires deep knowledge about whether the responses are reasonable. For example, the other side might reveal that their manufacturing costs are \$500,000, but is that a reasonable number? Knowing what is reasonable and feasible is important to judge whether the responses are indeed “too good to be true.” In our experiment, having the financial background to know that the steady returns Madoff achieved is impossible given the volatility of the market requires a complex understanding of financial markets. But even if individuals do not have that knowledge, they can ask others, who do not have a conflict of interest in the answer to the question.

**Attend to artful dodges.** When asked questions that could reveal the unethical nature of a situation, individuals may give non-answers to the question in order to deflect the attention away from the issue of concern. Thus, dodges to questions are signs that suspicions are warranted. For example, an individual who does not want others to know about the use of child labor may direct discussion on the quality of products or materials when asked about the low cost of labor. Research finds that individuals tend to not notice when others are answering a slightly different question from the one that was asked originally. One way to detect artful dodges is to remember the original question and to think critically on whether the answer is actually answering the focal question.

**Leave more time to decide.** After gathering all relevant information, leaving time to decide can prevent individuals from overlooking critical information. In a famous experiment, theological seminary students were asked to give a lecture. Some of the priests were told that they needed to hurry in order to arrive at the building on time, whereas other priests were told they would have enough time. On their way over to give the lecture, all of the priests passed by a

man slumped over, who appeared to be in need of medical attention. The priests who were not in a rush were more likely to help the man; those in a rush were more likely to pass this man without noticing him. Furthermore, time constraint was a bigger deterrent of helping behavior than the content of the talk, even when these seminary students were to be giving a talk on being a Good Samaritan. These findings demonstrate the impact of time constraints: even well-intentioned people who were teaching the importance of helping people failed to notice individuals in need. Furthermore, when people are in a rush, they 1) do not have enough time to do additional investigative work needed, and 2) fail to notice even when the obvious information is in front of them.

### **Future Directions**

Although increasing vigilance prior to making a decision decreased individuals' propensity to select Madoff's fund, more than half of the individuals in the intervention group still recommended Madoff's investments. Thus, more research is needed to understand other interventions that could reduce bounded ethicality and bounded awareness. One area to explore is the line between a true failure to notice and motivated blindness. Our experimental design prevented us from differentiating between individuals who failed to notice and those who did not *want* to notice. Rene-Thierry Magon de la Villehuchet, the CEO of Access International Advisers and Marketers, was repeatedly warned that Madoff's returns were suspicious, but he continued to invest his own money, his family's money, and his clients' money in Madoff's funds, ignoring the evidence in front of him. He committed suicide weeks after Madoff's funds collapsed. More research is needed to understand how to help individuals become more aware when they fail to notice and acknowledge uncomfortable or disconfirming information when they are motivated not to notice.

Additionally, although increasing vigilance led participants to attend to relevant information that led more of them to notice the unethicity of the disguised Madoff fund, more research is needed to understand the effectiveness of instilling a mindset of vigilance in an environment where individuals face many complex choices. Financial advisers manage hundreds of client accounts and select investments from thousands of possibilities. Under these circumstances, it is not surprising that financial advisers might have recommended Madoff based on his consistently high returns. Furthermore, the barriers to noticing are often much greater than they were in our experiment. Although there were many red flags that could have revealed Madoff's funds to be a fraud, there were also signals of quality that prevented financially savvy individuals from noticing. Madoff developed a credible reputation as the former chairman of NASDAQ, a position that led busy individuals to overlook the ethicality of his investments. Furthermore, given that gathering additional information is often difficult or time-intensive, more research is needed to understand if suspicion is sufficient in helping individuals notice unethicity in complex decisions where the barriers to noticing are much higher.

Extensions of this research could also investigate how having a mindset of vigilance might alter behaviors in other contexts. Although it is likely that vigilance increases propensity to notice, it may also harm the building of trust, which is critical in many interpersonal contexts. For example, excessive vigilance in negotiation may inhibit individuals from developing trust with their counterpart, leading them to avoid sharing critical information that could help both sides capture value that would otherwise be left on the table. Additional research would illuminate methods of developing a healthy amount of skepticism that enables individuals to notice relevant information while maintaining the ability to trust others and be open-minded.

## **Conclusion**

Noticing unethical behavior is a critical step to reducing bounded ethicality and bounded awareness in organizations. An empirical study in an investment context found that adopting a vigilant mindset helped individuals notice red flags regarding unethical behaviors of others and avoid choices that were in fact “too good to be true.” Organizational policies that require individuals to find reasons not to engage in a seemingly desirable course of action before finalizing major decisions could limit the degree to which individuals engage in unethical behavior without their awareness.

## Figures

Figure 1. The cumulative returns for the four funds and the S&P500 over a five-year period. The data for Fortitude Investments are based on real returns of Fairfield Sentry, a feeder fund of Madoff Investments.

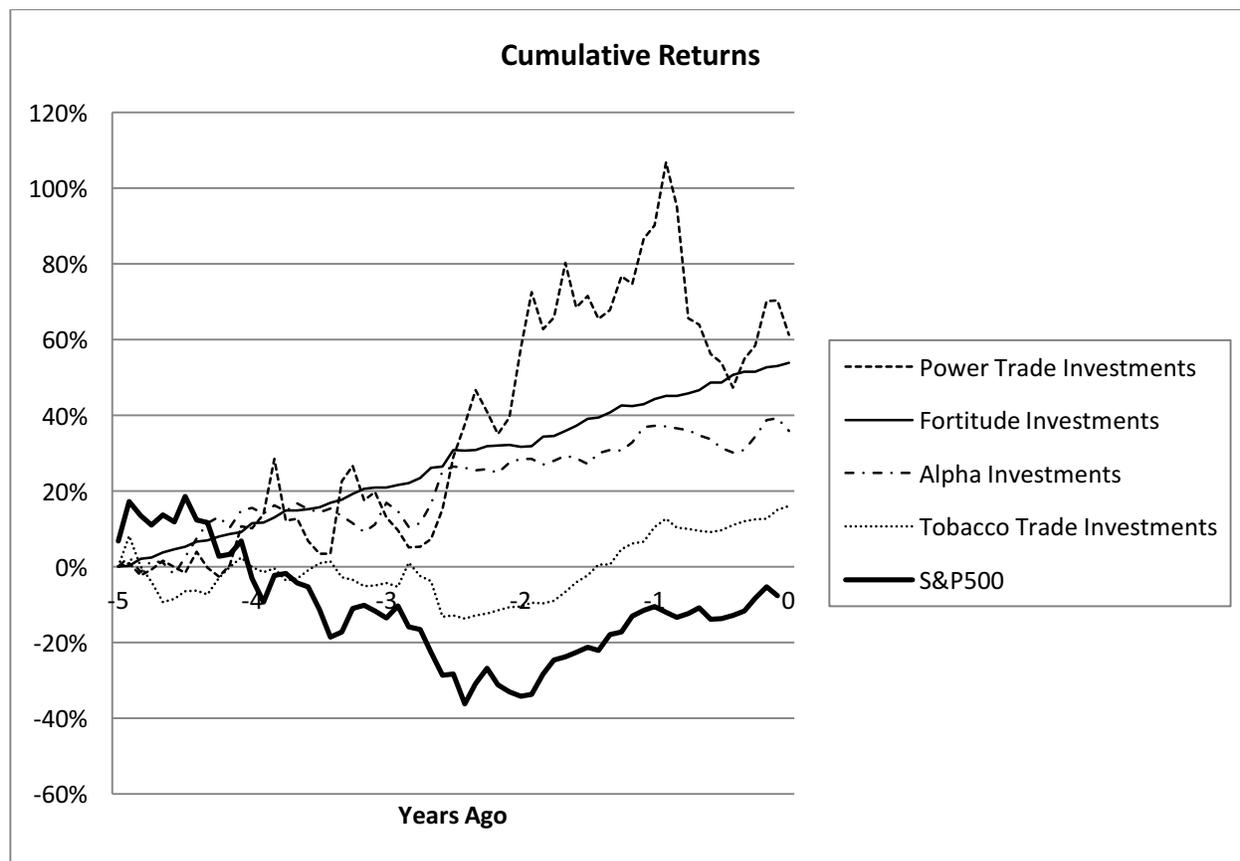
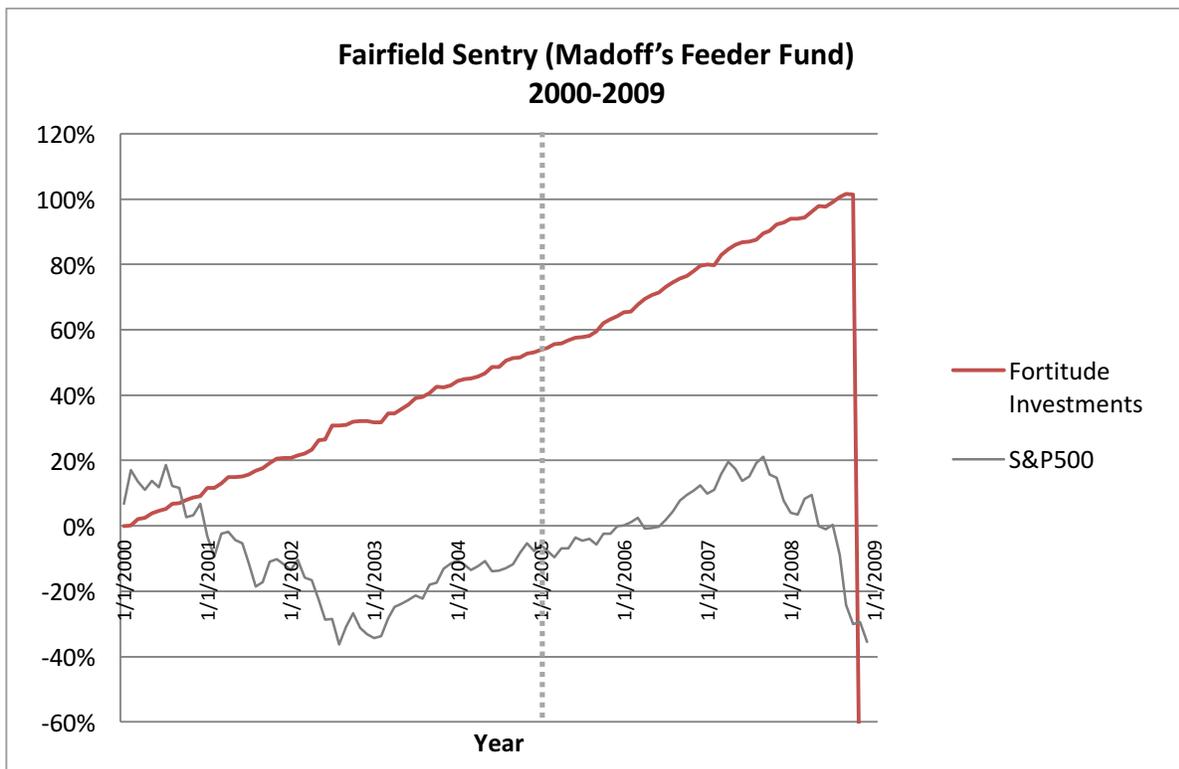


Figure 2. Cumulative returns of Fairfield Sentry (a Madoff feeder fund) between 2000 and 2009 benchmarked against the S&P 500. The period between 2000 and 2005 represent the historical data that participants used to make their decision, the dotted line represents the point at which participants made their decisions, and the sharp drop off in 2008 shows the fund's collapse four years later.



### Selected Bibliography

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## Appendix

Participants in this study played the role of a financial adviser in an investment game. Advisers were asked to select one fund to recommend to a hypothetical client from a pool of four funds, one of which, unbeknown to participants, is based on data from Madoff's feeder fund. In a between-subjects study, advisers were asked to consider which fund seemed the most suspicious to them either before or after making a recommendation for their client. Given that individuals often fail to notice the ethical nature of their decisions, we hypothesized that asking about suspicions prior to committing to an investment recommendation would help advisers become more attuned to alarm bells of unethical behavior around them and act on that information by avoiding Madoff's feeder fund in their client recommendations.

The timing of inducing vigilance is also critical to noticing. Given research showing that individuals seek consistency in their preferences and behaviors, we also hypothesized that raising suspicions after a decision has been made would be less impactful in helping individuals notice unethical behavior in their environment than raising suspicions prior to decision making. That is, once individuals have already made a decision, they may be less likely to consider disconfirming evidence and notice critical information.

**Participants.** Two hundred ninety-four U.S. participants (52% female,  $M_{age}=34.92$ ,  $SD=11.54$ ) completed this online survey. We used Amazon Mechanical Turk (MTurk), an online labor market, to recruit participants for this study. Researchers have verified MTurk to be a reliable alternative to university subject pools, with the added benefit of greater representativeness of the overall U.S. population. Participants received \$5 for completing the survey and were assigned to one of two conditions: raise suspicion either before or after making an investment decision.

**Design and procedure.** For a study entitled “The Investment Game,” participants were asked to imagine that they were giving financial advice to a new client who had recently received a \$75,000 bonus and wished to invest the entire amount into a fund for the next four years, at which point the client would cash the returns.

Advisers could choose to recommend one of four funds to the client. Advisers were given the following information based on returns of real funds between 2000 and 2005: five-year cumulative returns, average monthly returns, volatility, and the risk-adjusted returns. Participants also received the same information about the S&P500 as a benchmark of market conditions during the five-year period. Unbeknown to these advisers, one of the four funds, “Fortitude Investments,” was based on the returns of Fairfield Sentry, a feeder fund of Madoff’s investment firm. All fund names and dates were disguised. See Figure 1 for the cumulative returns of each of the four funds relative to the S&P500 provided to participants.

*Tobacco Trade Investments*

Risk-adjusted return: 0.42  
Five-year cumulative return: 16.02%  
Average monthly return: 0.40%  
Volatility: 2.99%

*Power Trade Investments*

Risk-adjusted return: 0.46  
Five-year cumulative return: 61.20%  
Average monthly return: 0.93%  
Volatility: 6.22%

*Fortitude Investments*

Risk-adjusted return: 0.75  
Five-year cumulative return: 53.81%  
Average monthly return: 0.75%  
Volatility: 0.71%

*Alpha Investments*

Risk-adjusted return: 0.54  
Five-year cumulative return: 36.81%  
Average monthly return: 0.61%

Volatility: 2.37%

Notably, Madoff's feeder fund, disguised as Fortitude Investments, had the most attractive risk-return profile relative to the other three funds. Because these returns were fabricated by Madoff, they were particularly high given their unusually low volatility. Power Trade Investments had the highest returns overall but also the highest volatility. Alpha Investments had more moderate returns, still above the market, but with low volatility. Tobacco Trade Investments had the lowest returns with high risk, making it the least attractive fund based on its risk-return profile.

Participants also had access to additional information about each fund in fine print, including the investment strategy, procedures for entry, and auditing practices of each fund. For the disguised Madoff feeder fund, the additional facts about funds informed advisers that the fund was exclusive to investors with strong relations to the fund, opaque on disclosing its investment strategy, and maintained unconventional auditing practices. To avoid detection that Fortitude was based on a feeder fund, the contents of the information were adapted from The following specific wording sent strong signals to these financial advisers that the fund was indeed involved in unethical trading practices:

*Fortitude Investment's strategy:* We cannot disclose any information at this time.

*How to begin investing:* We are selective in our investors and only those with good relationship with the firm can invest. As a result, typical investors we do not know cannot invest with us. However, as an adviser, we will open these investments to your clients, especially those who are interested in investing their money with us long-term.

*How Fortitude Investments is audited:* Fortitude uses SA & Associates, CPA for their auditing purposes. SA & Associates was established 15 years ago. The chief auditor was formerly a VP at Fortitude Investments and now works down the hall in the same building.

Based on this information, advisers then made a selection for their client and wrote their reasoning for their decision. Half of the participants were asked to indicate "which fund you find

the most suspicious” prior to making their decision; the other half answered this question after making their decision.

**Measures.** At the end of the study, participants indicated the extent to which the funds seemed unethical to them based on their ratings of how suspicious and unethical each of the funds were ( $\alpha > .70$ ) on a 7-point scale (1=not at all; 7=extremely).

## Results and Discussion

See Appendix Table 1 for an overview of these findings.

**Fund selection.** Participants who were asked to consider which fund was the most suspicious prior to making their decision were less likely to select Madoff’s feeder fund for their client (51%, 73/143) than those who contemplated this question after they made their investment decision (68%, 103/151),  $\chi^2(1, N = 294) = 9.00, p = .003$ .

**Vigilance.** Advisers were more likely to choose the Madoff fund as the most suspicious when answering the question prior to choosing which fund to recommend (48%, 70/143) rather than after (33%, 50/151),  $\chi^2(1, N = 294) = 6.37, p = .01$ .

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Insert Appendix Table 1 about here

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**Ratings of unethicality.** Advisers perceived the disguised Madoff fund as more unethical when they contemplated which of the funds seemed most suspicious before ( $M = 3.94, SD = 2.17$ ) rather than after ( $M = 3.39, SD = 1.98$ ) deciding which fund to recommend,  $t(292) = 2.25, p = .03$ .

**Mediation analysis.** Using procedures suggested by Baron and Kenny (1986), we examined whether perceptions of ethicality would mediate the effect of increasing vigilance prior

to making the decision on advisers' propensity to recommend Madoff's disguised fund.

Increasing vigilance prior to the decision was positively associated with greater perceptions of unethicity for Madoff's feeder fund ( $B = .54, t = 2.25, p = .03$ ) (see Appendix Table 2). When controlling for perceived unethicity, the effect of raising suspicion prior to making the decision was significantly reduced (from  $B = -.72, \text{Wald } \chi^2 = 8.90, p = .003$  to  $B = -.69, \text{Wald } \chi^2 = 4.04, p = .04$ ), and perceived unethicity predicted propensity to select the disguised Madoff fund ( $B = -.99, \text{Wald } \chi^2 = 88.04, p < .001$ ). A bootstrap analysis indicated that the 95% bias-corrected confidence interval for the size of the indirect effect excluded zero (-1.08, -0.06), suggesting a significant indirect effect (MacKinnon et al., 2007).

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 Insert Appendix Table 2 about here  
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Taken together, these findings demonstrate the role of vigilance in reducing bounded ethicality. We note that among participants who made their decision before considering which fund was most suspicious, 68% initially recommended the disguised Madoff fund to their client; by comparison, 48% of participants in the other condition initially selected Madoff as the most suspicious fund before making a recommendation for their client. These percentages total 116%, which is significantly greater than 100%,  $z = 3.00, p = .003$ , the expected value assuming that choosing the most suspicious fund was directly at odds with recommending the fund to the client. These findings suggest that individuals' views of Madoff's fund depended on whether they were prompted to look for evidence of the unethicity of Madoff's funds.

## Appendix Tables

Appendix Table 1. Summary of results

	Contemplated suspicions AFTER making client recommendation	Contemplated suspicions BEFORE making client recommendation
Selecting Madoff's fund for client	68%	51%
Choosing Madoff's fund as most suspicious	33%	48%
Unethicality of Madoff's fund	3.39 (1.98)	3.94 (2.17)

Appendix Table 2. Mediation analysis on propensity to recommend Madoff's feeder fund

Variable	Perceived Unethicality	Recommend Madoff	Recommend Madoff
	X → M	X → Y	X, M → Y
Suspicion before decision	.54*	-.72**	-.69*
Perceived unethicality			-.99***
R <sup>2</sup>	.02	.04	.60
95% bias-corrected CI			[-1.08, -.06]

*Note.* CI = unstandardized confidence interval for the indirect effect. The table reports unstandardized coefficients for each regression.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$