

Overcoming Biases to Promote Wise Investing

Inside this Report

Biases and their Effects on Investment Decisions	1
The Bias Blind Spot	2
Halo Effect	3
Optimistic Overconfidence	4
Fast Thinking	5
The Future Self vs. The Present Self	6
Intervention for the Halo Effect	7
Intervention for Optimistic Overconfidence	9
Intervention for Fast Thinking	11
Intervention for Future Self vs. Present Self	13
Further Reading	15

Special Points of Interest:

- Biases affect us unconsciously, so we are unaware of their influences on us.
- The biases outlined in this report influence our ability to make objective, reasoned decisions in the realm of investing.

Biases Can Negatively Affect Investment Decisions

Most Americans hope to be well-prepared financially for their retirement and for their future more generally. While some of them give little thought to the details of how they might reach those financial goals, others devote considerable attention to thinking about their investment options. Unfortunately, what people in both of these categories have in common is that, like most Americans, they do not know that there are biases influencing their investment decisions.

In order to invest wisely, people must overcome various psychological biases that can cloud rational thinking. Because human beings cannot process information as rationally as, for example computers, this problem affects almost all investors, regardless of their age, level of education, gender, etc. We recently have studied three types of biases that can negatively affect investment. We have identified their negative effects and tested ways of preventing those effects.

The biases we have studied involve *failing to recognize* irrational influences on one's judgments and decisions, seeing *oneself in the future* as very removed from one's present self, and making grandiose decisions in the face of *overly-fast thinking*. By studying these biases, we seek to promote people's efforts to engage in wise, informed, and practical investing.

Psychological research has made giant strides in the past three decades in understanding biases that compromise human judgment. These biases tend to crop up in precisely the sorts of situations that are involved in investment decisions. That is, they occur when information is *complex*, when decisions involve *risk and uncertainty*, when people are *motivated* to see things positively (e.g., "this investment will make me rich!"), and when people feel conflicted between their *short-term vs. long-term* desires (e.g., spending now vs. saving for later). Fortunately, because these fo-



Calculating investment options may not be so simple.

bles are psychological, they are amenable to psychological intervention. And, psychologists have learned that small psychological interventions can have big effects.

This report describes the investment problems associated with the biases we have studied, the key results of our studies, and suggested interventions for helping people to make wiser investment choices, everyday.

Emily Pronin, Ph.D. was the lead investigator on this research. She is currently Assistant Professor of Psychology and Public Affairs at Princeton University. This research was generously supported by a grant from the FINRA Investor Education Foundation. Report date: August, 1, 2007

The Bias Blind Spot

The Bias Blind Spot

People tend to show a “bias blind spot” whereby they are unaware of (or “blind” to) biasing influences on their own judgments. People acknowledge that biases affect *other people’s* choices and actions, but they are less likely to acknowledge bias in themselves (see figure).

Bias on an Unconscious Level

People deny being influenced by bias in large part because biases often occur unconsciously. In order

to determine whether they are biased, people generally look to their conscious motives (rather than to their actions). As a result, when bias occurs unconsciously, people tend to infer that they are unbiased (rather than that they are biased, but unaware of it).

Education is Key

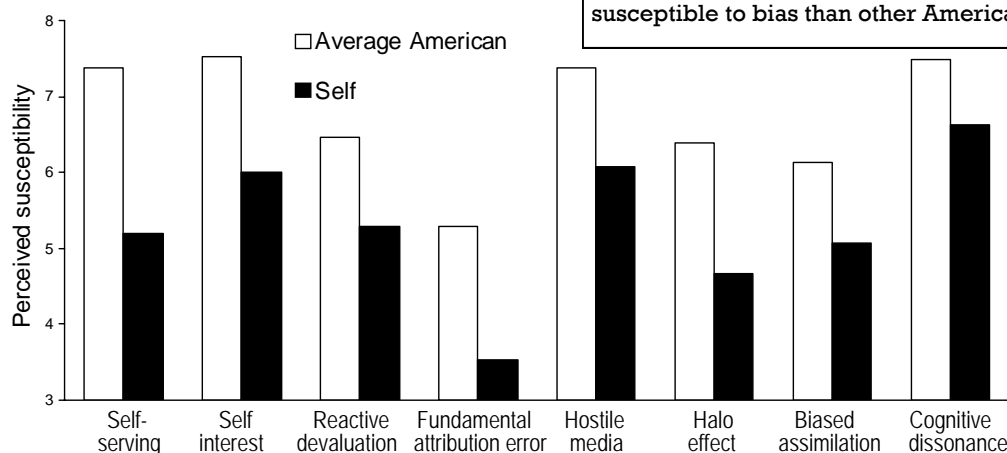
All of this suggests that people need to be educated about biases that affect their judgments. It suggests that they need to be educated not only about the nature and consequences of these biases, but also about the fact that they operate unconsciously.

Research

In our research, we have found that people’s blindness to their own biases can be overcome by educating them about unconscious influences on behavior. In one experiment, subjects read an article that described psychological findings concerning the role of unconscious processes in influencing attitudes and behavior (see figure at right for a clip). Afterwards, those who read the article did not show the usual tendency to deny their own bias, whereas those in the control condition did. This result suggests that education about unconscious influences can prevent the bias blind spot.

Halo Effect and Overconfidence

Our research has addressed two particular biases that operate unconsciously and negatively affect investment behavior. One is the “halo effect,” whereby when a person (such as a stock broker) comes across positively on one central dimension (such as likeability) that person subsequently is judged more positively on other unrelated dimensions (such as intelligence). The other bias involves people’s “optimistic overconfidence” (or “unrealistic optimism”) about aspects of their future, such as their future wealth. Most people can readily recognize how these biases could negatively affect investment decisions. However, because these biases occur unconsciously, most people are unlikely to recognize (and, therefore, to try to correct for) the effects of these biases on their *own investment decisions*. Our first studies (pages 3-4) aimed to address this concern.



People believe that they are far less susceptible to bias than other Americans.

Note: Subjects reported their perceptions of their own and the “average American’s” susceptibility to eight common biases in human judgment and inference.

19. T. Elbeik et al., *J. Clin. Microbiol.* 42, 563 (2004).
 20. P. Ball, *Nature* 431, 624 (2004).
 21. F. J. Ghadessy et al., *Proc. Natl. Acad. Sci. U.S.A.* 98, 4552 (2001).

Unaware of Our Unawareness

Gavin Mandel^{1*},

“I’ll know it when I see it,” runs the popular refrain. It’s been used to explain how we can recognize everything from obscenity to true love. But how much can we trust what we see or, rather, what we think we see? For decades, cognitive psychologists have been discovering that there is more going on in our brains than we could ever be consciously aware of, even for a moment. The simple tasks of everyday life are so complex that they would overwhelm us if we had to supervise them all the time.

Consciousness Overthrown

What sorts of things influence our brains without our noticing? The list is extensive. The earliest of the true classics was a bystander intervention study (1). Imagine that you have

any one person helping are inversely proportional to the number of others who are in a position to help. Though researchers have found this effect in many studies, their research subjects tend to deny that it happens (2-5). They insist that the number of people in the study had not affected them whatsoever. Their brains had fooled them completely.

Recent Research

The most recent developments have been in the area of social behavior and goal pursuit. What is most striking about these demonstrations of unconscious influences is that the effects are obtained by extremely subtle psychological manipulations. A person is non-consciously cued to think about a certain idea by, for example, showing them adjectives related to rudeness in a “language skills test.” This is referred to as *priming*. If you take this person who is having unconscious “rude” thoughts and give him or her a chance to behave in a rude manner – such as interrupting an experimenter who is conversing with another person – the subject will exhibit greater rudeness, by interrupting faster (6). The subject does not realize that they’re acting differently because of the words they saw. They instead come up with a story about how they’d been having a bad day, or that they were in a hurry. Yet, time and time again, the nonconscious cues have their effect (7-9). In fact, we get the same results even if subjects see the “rudeness” words flash on a screen subliminally – i.e., so quickly they don’t realize they saw anything (10).

¹ Department of Psychology
 *To whom correspondence should be addressed.
 Email: GMandel@Harvard.edu
 Department of Psychology, Harvard University,
 Cambridge, MA 02138

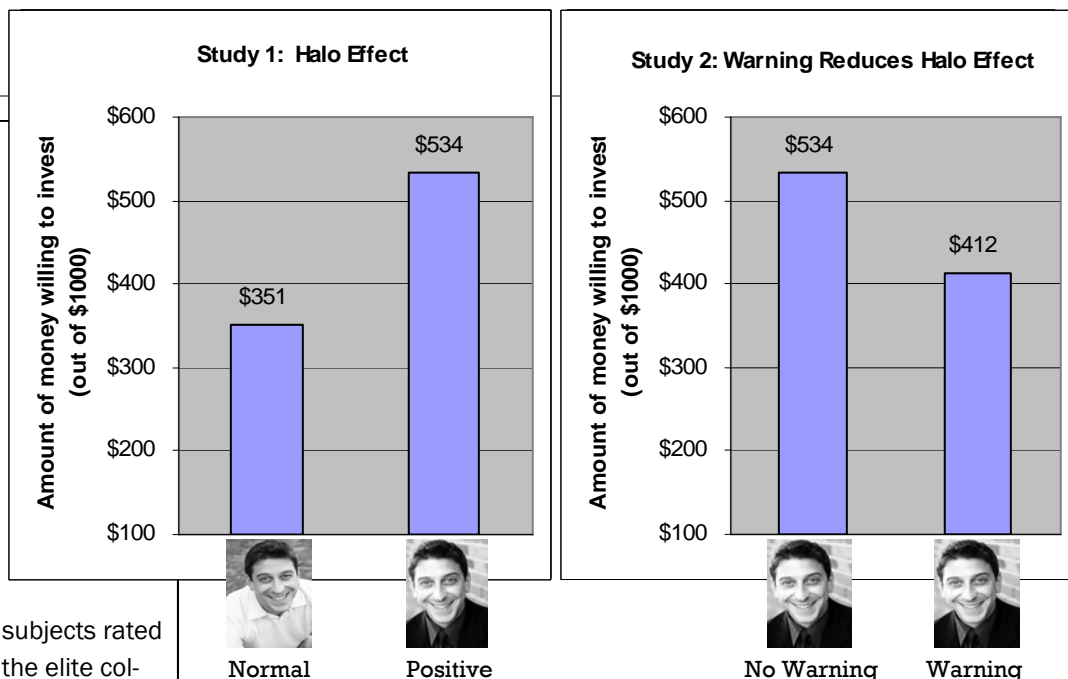
Halo Effect

THE PROBLEM

One bias we commit is the “halo effect.” The particular problem of the halo effect is that it leads people to judge others positively on dimensions for which they do not know if the other person is deserving of such positive judgment. In the most classic example of the effect, we tend to judge people whom we like as also being more attractive and competent. In the present studies, we examined whether a stock broker who presented himself as an Ivy League graduate, and who wore a suit and tie, would be judged as also being especially competent and trustworthy. Such a halo effect could be damaging, if it led people to overlook the importance of getting a background check on a broker before investing, and if it led people to invest more money than they should. We expected these results to occur because of the unconscious nature of the halo effect bias, and we sought to examine whether education about the bias would prevent these effects.

KEY RESULTS

In our studies, we found that people show a halo effect in how they form impressions of investment professionals. In one study, subjects viewed information about an alleged financial broker. Half of the subjects saw a photograph of the “broker” dressed in a business suit and read that he went to Cornell University. The other half of the subjects saw a picture of the same man, but dressed more casually, and read that he went to Elmira College. The result was that subjects rated the broker in the business suit with the elite college education as more competent and less in need of background check than the other broker, and they wanted to *invest more of their money with him* (without a background check); see left figure. In another study, we forewarned subjects about the halo bias before they viewed the broker photographs and descriptions. This manipulation reduced the halo effect; see right figure.



METHOD DETAILS

Study 1 (left figure): Subjects viewed one of two profiles of an alleged stock broker, either “halo condition” or “normal,” and were asked how much money (out of \$1000) they would invest with that broker.

Study 2 (right figure): Subjects saw the “halo condition” broker and either received a warning about the halo bias or received no such warning, and then were asked how much money (out of \$1000) they would invest with that broker.

SUGGESTED INTERVENTIONS

- **PRESS RELEASE** - We suggest submitting a press release to a major newspaper since our findings suggest that education can reverse this bias. (See Box 1, and pages 7-8)
- **WARNINGS ON WEBSITES** - In order to influence potential investors, we recommend adding warnings about the effects of this bias to financial and investing websites.
- **ADVERTISEMENT** - We recommend that a public service announcement (PSA) be placed on billboards, in magazines, and on websites to alert the public about the importance of background checks. The PSA should let the public know that they are influenced by the halo bias, even if they do not feel the bias occurring.

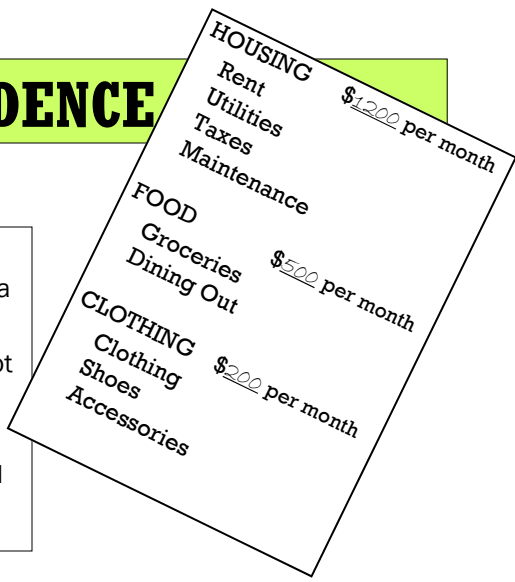
BOX 1

A press release would do a number of things to educate people about the halo effect, and other biases (including optimistic overconfidence) about which they are likely unaware. It would educate them about the fact that these biases exist, and about the fact that they operate on an unconscious level. Our research shows that education is effective at making people realize that they are susceptible to the effects of unconscious bias. The press release would aim to capitalize on this promising finding about the value of education about bias (and about its unconscious nature). The goal of the press release would be to prompt people to recognize, aim to correct for, and successfully overcome the negative influence of these biases.

OPTIMISTIC OVERCONFIDENCE

THE PROBLEM

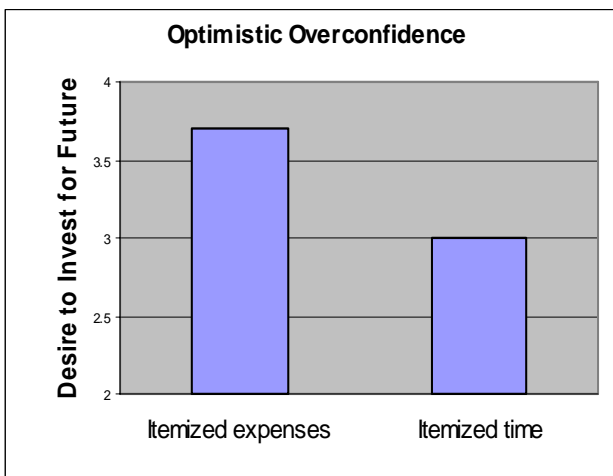
Another bias that people commit without knowing it is the “optimistic overconfidence” bias. People tend to be unrealistically optimistic about their future financial wealth. As a consequence, they often fail to save enough for retirement, and they make investment choices that are riskier than they can afford. As a result of this bias, people often are not well-prepared for retirement or other future financial endeavors. Since this bias occurs unconsciously, people are unaware of its influences and thus do not take steps to overcome it. These studies aimed to demonstrate the relevance of this bias to investing and to suggest a method for preventing its effects.



KEY RESULTS

In one study, we found that forewarning subjects about people’s tendency to be optimistically overconfident had a small effect on their investment preferences. People were slightly more likely to think that it was important for them to invest *now* for their retirement, and to think that their retirement was less financially secure, after being forewarned about the optimistic overconfidence bias.

In another study, we aimed to go one step further and *prevent* people from showing the optimistic bias in the first place. Subjects were asked to list, in itemized form, their projected expenses during retirement. Compared to a control group (in which subjects listed, in itemized form, how they would spend their *time* during retirement), subjects who itemizes their expected expenses showed more concern about investing for their retirement. Apparently, listing their expected expenses led them to recognize how much money they would need in order to retire comfortably – and this realization made them less confident in their financial futures and more convinced of their need to invest now (see figure).



SUGGESTED INTERVENTIONS

- ITEMIZATION - We found that an effective way to convince people of the need to invest for retirement is to have them itemize their expected expenses. Thus, this process should be incorporated into existing investing and banking websites and should be required before people make major final decisions. (See pages 9-10)
- YOUNG PEOPLE - This bias is particularly an issue for young people because it is important to begin investing at a young age in order to adequately prepare for retirement. In order to reach a younger audience, an advertisement should be placed on websites targeting young adults, such as www.thefacebook.com. (See Box 2)
- PRESS RELEASE - We recommend submitting a press release to a major newspaper since our studies show that education is an effective intervention for this bias. (See press release on pages 7-8)

METHOD DETAILS

Sixty-five commuters waiting for their trains to arrive at Princeton Junction (median age = 29) were asked to make an itemized list of their expected monthly expenses during retirement (or, in a control condition, to make an itemized list of their expected time spent during retirement). Afterwards, participants assessed their future financial situation and their need to save *now* for later.

BOX 2

This advertisement would aim to encourage young people to prepare for retirement now and to itemize their expenses in order to make sure they allocate enough money towards their savings.

**“Most people don’t realize how expensive it is to retire...
Itemize your retirement expenses NOW to
make sure you have your savings on track!”**

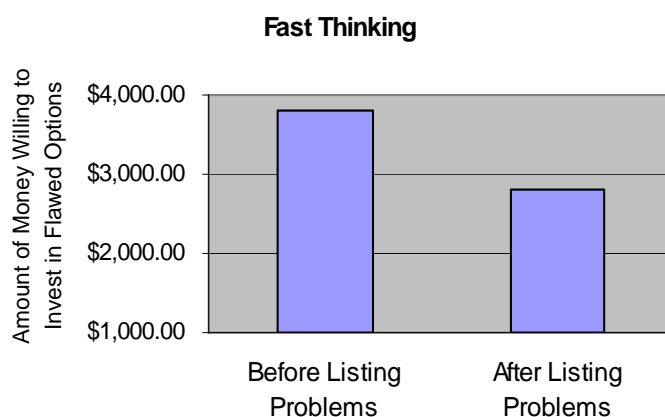
FAST THINKING

THE PROBLEM

This bias involves peoples' tendency to become grandiose and impetuous in situations where they are led to think too fast. This is especially likely to occur when people are faced with large quantities of information in a short period of time. In such situations, people run the risk of making unwise investment decisions. Unfortunately, such situations are common. All too often, people find themselves surfing the web looking for investment options only to be bombarded with copious amounts of information without much filter. In other situations, people attend seminars where fast-talkers present them with more ideas and information than they can process in a short amount of time. Even in one-on-one meetings with a financial advisor, people may become overly excited by the speed with which they are presented with different options or ideas. Instead of being able to sort through the facts at their own pace, people may find that their minds are racing with ideas and possibilities, and with thoughts about their future wealth. As a result, they may make grandiose decisions (e.g., investing too much, or too riskily), or impetuous ones (i.e., investing before thinking things through carefully).

KEY RESULTS

In one study, subjects had to make investment decisions at a fast and high-pressure speed (i.e., one decision every 4 seconds) versus at a more slow and comfortable speed (i.e., every 30 seconds). The result was that subjects in the fast condition were far happier and more excited after making their decisions, even though their decisions were not any better. This result suggests the need for ways of slowing down people's thought speed during investment decision-making. In another study, we attempted to do that. Subjects' thoughts were slowed by having them list problems with a set of investments, rather than immediately issuing their opinion on those investments. The result was that participants saw flawed investments as being of worse quality, and they were less inclined to invest their money in them, *after* their thoughts had been slowed down by listing problems (see figure). The listing process made them better able to recognize flawed investments and less zealous about investing their money in them.



METHOD DETAILS

Thirty-two college students were asked to read paragraph-long descriptions of nine alleged investment opportunities (e.g., condominiums in Florida, an independent film company, etc.). They then rated the quality of the different options and indicated how much money they would want to invest in them. Next, they listed potential drawbacks to the different options, and then offered those ratings and indications again.

SUGGESTED INTERVENTIONS

- **LISTING FLAWS** - For investors who use internet sites for investing, websites should require users to list possible drawbacks to each option they consider before making a final choice. (See Box 3)
- **BREIF HOLD** - This intervention could be applied to investing websites where people allocate their money to different investments, and also to in-person investment methods (e.g., meeting with a financial adviser). It would require investors to take 30 minutes "to think" before committing to a particular investment decision. (See pages 11-12)
- **BILLBOARD** - A public service announcement could warn people about the dangers of making decisions too fast and encourage them to consider the pros and cons of each of their options before deciding, thus encouraging them to slow down their pre-decision thoughts.

BOX 3

In our studies, a listing-problems intervention succeeded in leading participants to better recognize flaws in investment options and to make more conservative investment decisions. One advantage of this intervention is that it not only slows down investors' thought speed, but also gets them thinking about possible drawbacks of their decision. Not only could such an intervention be integrated into investing websites, but it could also be implemented by financial advisors assisting investors in making financial decisions.

THE FUTURE SELF VS. THE PRESENT SELF

THE PROBLEM

This bias involves the tendency for people to think about their future selves as though they are other people. This bias may lead people to neglect (or fail to protect) their future selves due to the irrational feeling that by the time the future comes around, they will be a different person anyway. As a result, people may treat the finances of their future selves less carefully and thoughtfully than they would treat the finances of their present selves. Moreover, people are likely to engage in financial behaviors that are rewarding presently (e.g., spending their money on a fancy cell phone or plasma television) rather than saving their money for the future or engaging in behaviors that will be profitable in the long-run. As a consequence, people are likely to find themselves financially unprepared for retirement.

KEY RESULTS

We have conducted a series of experiments demonstrating people's inclination to neglect the finances of their future self. In these studies, people preferred financial rewards that were smaller — but that they could spend *now* — to rewards that were larger, but that would be available in the *future*. We first showed that people tended to prefer less money now to more money later, when given the choice between \$50 now or \$65 in a few months. We next identified four effective interventions for addressing this problem (see table at right). For Intervention 1, people were instructed to put their emotions aside, and to take a more rational perspective, when making their decision. For Intervention 2, people were reminded that they would be the “same person” in the future (with similar financial needs) as they were now. For Intervention 3, people were asked to choose between \$50 in a few months or \$65 a few months *after that*. For Intervention 4, people were asked to make the decision for another person (i.e., a peer) rather than for themselves. In the presence of each of these four interventions, subjects showed a strong (and more rational) inclination to prefer the later but larger financial reward.

Deferring Financial Rewards

Percentage of participants delaying a proximate reward for a larger reward further in the future:	46%
1) ... after being told to put emotions aside:	71%
2) ... after being reminded that they will be the “same person” in the future:	93%
3) ... when deferring a future (rather than present) reward for one even <i>further</i> into the future:	74%
4) ... when asked to make the decision for a peer rather than for oneself:	74%

METHOD DETAILS

Participants chose their method of compensation for participating in a psychology experiment (unbeknownst to them, their choice was the experiment). They chose between receiving \$50 sooner or \$65 later. Four interventions were tested in order to stem people's reluctance to delay financial rewards: 1) Asking people to put their emotions aside when making the decision, 2) Reminding people that they would be the same person in the future as now, 3) Offering a choice between \$50 in a few months or \$65 in a few months *after that*, 4) Asking people to choose for a peer (rather than for themselves).

SUGGESTED INTERVENTIONS

- **TRUSTED OTHER** - People may be better able to appreciate the wisdom of making more future-oriented decisions for others than for themselves. Therefore, when making decisions about their financial future, people could be instructed to first think about what decision they would make if they were instead advising a loved one.
- **FUTURE COMMITMENT** - Since our studies show that people will be more willing to delay financial rewards when considering future delays rather than present ones, people should be advised to make investment decisions that will take effect in the future (e.g., in six months) rather than right away. (See Box 4, and pages 13-14)
- **PSA** - People should be reminded, in the course of relevant PSA campaigns, that they will be the same person in the future as they are now.

BOX 4

Instead of asking people to put 5% of their *current paycheck* into an IRA or 401(k), for example, we suggest that people be asked to commit to putting 5% of a more distant paycheck (*next month's, or the month after that, or six months down the road*) into that account. Thus, people do not need to be asked to commit funds that they have just received or are about to receive (and may have already planned how they will spend). Our results suggest that people will be more willing to commit to investing future earnings than present ones. Many banks, employers, and investment companies could offer this op-

Intervention for Halo Effect

Nature of Intervention

PRESS RELEASE

Rationale

People do not know about the nature of consequences of important biases that affect investment behavior, nor do they know that these biases affect people on an unconscious level. Our research has shown that educating people about the importance of unconscious biases in influencing investment behavior allows people to recognize their susceptibility to those biases and to try to correct for them. This result has been demonstrated most directly in the context of the halo effect. In order to provide this education at a mass level, we suggest that a press release be issued in order to encourage the press to report to the public about the role of unconscious bias in compromising investment behavior.

Overview

We suggest the issuing of a press release that could lead to dissemination of these lessons in widely-read media sources. The release would aim to elicit reporting that would reach a large number of people and would educate them about unconscious biases, including the halo effect, and about the negative consequences associated with those biases. Our research suggests that such education would be an effective intervention for reducing commissions of these harmful biases.

Details

A sample press release is included below.

Making Unwise Investment Choices Without Knowing It

Financial planning and investing are important parts of our lives. We do our best to make wise financial and investment choices in order to plan for retirement, prepare for our children's college expenses, buy a new home, etc. We research the various financial paths that are available to us and some of us even put our financial futures into the hands of professionals. We assume that we are adequately skilled at handling our own financial planning or that we are adept at choosing the right financial professional. But are we? Research shows that there are biases negatively influencing our investment choices without our knowledge.

Psychological researchers of judgment and decision-making, beginning with the classic work of Amos Tversky and Daniel Kahneman, have made giant strides in the past three decades in understanding biases that compromise sound human judgment. These biases prevent us from rationally processing information, and they tend to crop up in precisely the sorts of situations that are involved in *investment-related decisions*. That is, these biases tend to occur when four things are true: 1) when information is **complex** (e.g., there are lots of financial facts and figures to absorb), 2) when decisions involve **risk and uncertainty** (e.g., when there is no sure way of knowing whether an investment will be profitable), 3) when we want to view things **positively** (e.g., we hope that an investment will make us rich), and (4) when we experience a conflict between what seems best in the **short- vs. long-term** (e.g., we want to spend money now, but also save for later). When it comes to investing, biases are everywhere. Fortunately, the more you know, the more you can do to prevent them.

Research conducted in the laboratory of Emily Pronin, Assistant Professor of Psychology and Public Affairs at Princeton University, has recently studied two biases that can compromise wise financial investing: the "halo" effect, and "optimistic overconfidence." The halo effect involves the tendency for us to assume that others who rank highly on some centrally important quality, such as warmth or likeability, also possess other unrelated positive qualities, such as intelligence, trustworthiness, and competence. This bias can be problematic when it comes to making important investment decisions, such as choosing a professional financial advisor or stock broker. When we view a broker as "nice," we may be inclined to also view him or her as smart, honest, and competent. And, we are likely to make those assumptions without even realizing that we are doing it.

Intervention for Halo Effect, cont.

In one of our studies, people read a profile of a broker who was pictured in a suit and tie and said to have an Ivy League education (from Cornell University). In a control condition, the same man was profiled, but this time he was pictured in a short-sleeved polo shirt and said to have a less prestigious education (from Elmira College). The results were that people were more inclined to invest their money with the broker in the suit and tie and with the fancy education — without even conducting a background check. As a result of the “halo” effect, people were willing to place unwarranted trust in a broker about whom they knew almost nothing.

Unfortunately, people are usually unaware of their bias when they are committing biases such as the halo effect. In the real world, we do not get to choose between two identical brokers who differ only in their clothing choices or educations, so we are unlikely to recognize our commissions of biases like the halo effect. Indeed, such biases typically occur unconsciously, which means that even when we are sure we’re not showing them we might be. Fortunately, learning about the unconscious nature of bias helps. In our research, when subjects were told about the “halo” effect in advance of viewing the brokers’ profiles, they avoided showing the usual bias.

Another common bias that can lead to unwise investing involves our tendency to be “unrealistically optimistic” about our futures. Most of us believe that we will be healthy, wealthy, and wise in the future. Because we are over-optimistic about our future wealth, we inadequately prepare for retirement now. Due to our unrealistic optimism, we tend to make foolishly risky investments — both because we over-estimate the odds that they will pay off in the end, and because we are not concerned enough about our need for a certain minimum level of future wealth.

In our research, we have found that because of the unconscious nature of optimistic overconfidence (or “unrealistic optimism”) — the vast majority of people are unrealistically optimistic but also strongly deny showing the bias — the bias is difficult to overcome. One thing, we have found, does help. In particular, one way to overcome the hazards of unrealistic optimism is to itemize one’s expected expenses for the future. This involves projecting how much money one will need, per month, when one retires for each of one’s different categories of expenses (e.g., clothing, entertainment, healthcare, travel, insurance, etc.). In our research, we found that when people take the time to itemize their future expenses, they come to feel significantly more concerned about saving and investing for their retirement. Something as simple as listing our future expenses can lead us to realize how much money we actually will need in order to cover our living expenses during retirement (and how much we need to put aside in order to have that money).

People are affected by biases unconsciously. These biases include the halo effect and optimistic overconfidence, both of which can compromise wise investing behavior. As a first step in avoiding falling prey to these biases, people should learn more about them, dismiss the assumption that they personally are immune to them, and outline steps (such as getting background checks to avoid the halo effect, and itemizing retirement expenses to avoid optimistic overconfidence) for avoiding the impact of these biases on their financial decisions.

Variants

Variants on the press release approach could involve more direct efforts to reach the public, via commercials or print/web advertisements, in order to educate them about the nature and effects of biases including the halo effect.

Summary

To help people overcome the halo effect, a press release should be used to educate people about the bias and its effects, as well as the unconscious nature of bias more generally.

Intervention for Optimistic Overconfidence

Nature of Intervention

ITEMIZATION

Rationale

People tend to be overly optimistic about their financial futures. They do not realize how much money they will need to cover their expenses during retirement. Our research has shown that having people itemize their expected expenses makes them more cognizant of their future financial needs and of their current distance from meeting those needs. Thus, itemizing helps people to realize the need for them to save now for later. We thus suggest a large-scale effort to induce people to itemize their future expenses, as a way of inducing them to save and invest for retirement.

Overview

In order to place itemization into common language, billboards, advertisements, and commercials should be used. Ideally, the pro retirement-investing phrase “itemize your future” would become as well known among working adults as the anti drug-use phrase “just say no” was made well-known among teenagers. As the public commutes to work and school, watches television, and reads magazines, they should be reminded to itemize their expenses. And, people’s interest in itemizing should be aided by the efforts of investment professionals. This will influence people’s preparations for a comfortable retirement by making sure that they are aware of their need to save and invest for retirement.

Details

The marketing slogan for itemizing would be present through various media in order to reach a vast number of people. Billboards on highways would read “Have you saved enough for retirement? Itemize your future to make sure!” Similar advertisements would run in newspapers and popular magazines. These advertisements would contain a sample itemization list to illustrate the idea as well as to encourage people to think about itemizing their expenses. They also would provide a **web address** where people could go to complete online (or print out) their own itemization list (see figure for example). Television commercials aimed at the appropriate demographics could describe the optimistic overconfidence bias and illustrate itemization by presenting the lives of two people; one who itemized his/her expenses and one who did not. The one

HOUSING	\$___ per month
Rent	
Utilities (e.g., gas, electric, phone, cable)	
Property Taxes	
Maintenance	
FOOD	\$___ per month
Groceries	
Dining Out	
Beverages (alcoholic and non-alcoholic)	
CLOTHING	\$___ per month
Clothing	
Shoes	
Accessories	
Dry Cleaning, Alterations	
ENTERTAINMENT	\$___ per month
Movies, Concerts, and Theater	
Sporting Events	
Social and Athletic Club Memberships	
Vacations	
HEALTHCARE	\$___ per month
Medical checkups	
Dental checkups	
Eyeglasses	
(etc. — etc. — etc.)	

Intervention for Optimistic Overconfidence, cont.

who did not itemize would be shown not having saved enough money to retire and having to work part-time to supplement the low savings. The one who did itemize would be shown relaxing and playing golf during retirement because he/she saved enough.

In order for an itemizing campaign to be effective, it would ideally bring on board the cooperation of financial advisers and brokers. This would probably require some self-governance on the part of the NASD, whereby investment professionals would be required to have first-time investors itemize their future expenses before investing money in individual stocks, bonds, mutual funds, etc. The itemized list they would complete would be extremely detailed to be sure nothing gets left out. Thus, each time a personal investor would sit down with a financial advisor, the advisor would require him/her to make a detailed itemized list of his/her expected expenses during retirement. The list would include categories such as housing costs, food and clothing costs, entertainment costs, etc., under which would be subcategories for more specific expenses. For example, under "Housing" would be "Rent/Mortgage", "Utilities", "Taxes", "Maintenance", "Additions," etc. Each category would contain as many expenses as possible (since the more detailed the itemizing people do, the more concerned about their need for future savings they are likely to be). Investors would list their projected expenses on a monthly basis, with the option to include additional annual expenses (for costs that were not easily parsed on a monthly basis).

Investors would be required to complete the itemization list before making any investments. After completing the list, the investor could, with the assistance of his or her financial advisor, calculate how much he or she would need to put away every month for retirement in order to have enough to cover the expenses that the investor projected on the sheet. The broker would need to take into account the current age of the investor and his/her desired retirement age in order to accurately calculate monthly savings.

Variants

Many investors choose to invest their money over the internet. For these situations, a broker would not be present to require the user to itemize his or her expenses and calculate the appropriate amount to save every month. In that case, the online programs operated by brokerage firms could have investors itemize their expenses on the computer by typing in the amounts. Those websites could provide their own itemization programs modeled after the one on the website referred to earlier (as part of the advertising effort). Once all of the amounts are entered, the program could offer additional algorithms for helping people to calculate how much total money they might need for retirement, and how much they would need to save every month in order to attain that desired amount. The program could also alert people to cases in which their projected expenses fall below the norm, so that they could re-consider whether they have adequately budgeted their expenses on that dimension. Thus, if people have shown unrealistic optimism in their calculations (for example, in calculating their future medical expenses or housing costs), the computer program could alert them to this fact (by letting them know that their estimate fell far below the average expenses incurred by individuals in their socioeconomic group during retirement).

Summary

To help people overcome the optimistic overconfidence bias, they should be induced to itemize their expected expenses. In order to encourage this itemization process, investors should be exposed to advertisements encouraging them to itemize their expenses. Moreover, investment professionals and relevant financial websites should require itemization prior to investing.

Intervention for Fast Thinking

Nature of Intervention

SLOWING DECISION-MAKING

Rationale

When people's thoughts are racing because they are taking in a great deal of information in a small amount of time, they tend to become excited and risk-taking, and to make grandiose and impetuous decisions. Our research has shown that slowing down people's thoughts, by having them list flaws in potential options, allows them to recognize the negative aspects of certain investment options. More generally, this work points to the importance of slowing down people's decision-making process about investment choices, particularly when large amounts of money are at stake.

Overview

Our research has shown that slowing down people's thought speed makes them more likely to avoid risky and unwise financial decisions. For that reason, we propose slowing down people's thoughts through a variety of possible methods. These could include: having them think privately about potential flaws in their investment options before committing, requiring a brief hold (30 minutes) before an investment decision can be finalized, or providing a short (24 hour) rescission period on investment decisions.

Details

These interventions can be applied in the moment, or during the post-decision period (which, all too often, can be a "regret period"). In the moment, people can be induced to take some "private time" to evaluate potential downsides in their investment options. During the post-decision period, people could be prevented from making impetuous decisions by being induced to wait a period of time before those decisions can be finalized, or by being offered a short rescission period (perhaps 24 hours) that, if they opted for it, would provide them with some time during which they could reverse their decision before it went into effect.

Inducing investors to take some "private time" intervention would have two benefits in terms of slowing their thinking. First, it would *literally* give them some *time* to think about their decision, and its potential benefits versus flaws. Second, it would give them this time in private, apart from any potential pressure

(whether intended or not) on the part of their financial adviser. Because the presence of a fast-taking and enthusiastic professional could contribute to fast thinking, private time (even a few minutes in a separate room) could be better than time spent in the presence of an advisor. During this time, investors could be asked to respond to a series of questions (about 15-20) regarding their investment choice. These questions (see sample at right) would be provided by the investment professional, and

Investment Questionnaire	
<i>Instructions: Please respond to the following questions before making your investment decision.</i>	
How safe is this investment compared to your other options?	
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	
Much less	Much more
Are there other alternatives to this investment that are worth considering before you commit?	
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	
Definitely not	Definitely yes

Intervention for Fast Thinking, cont.

the investor would be required to complete them prior to committing to his or her decision. The questions would be designed to make one think about other options and whether or not the option under consideration is the right one. Because thinking fast can cause people to become grandiose, the questions would also be designed to get them to focus on weighing the specific pros and cons of their choices. Possible questions could include: “Are there other alternatives to this investment that are worth looking into before making your decision?” “Are there negative aspects of this choice and, if yes, do they outweigh the positive ones?” “How much time have you devoted to researching this option?” Individuals’ specific responses to these items are not the critical factor in this exercise — what is critical is that they engage in the process of thinking about their decision in a fashion that is made somewhat more slow and deliberate by virtue of having to answer the questions.

When investments are made via the web rather than in consultation with an investment professional, investors could still be required to answer a series of computer-based questions.

The 30-minute hold and 24-hour voluntary rescission period would have the goal of preventing investors from making rash decisions that could be precipitated by the excitement brought on by fast thinking. As with the “private time,” they also would be used to explicitly encourage investors to “take the time” to slow down and think about the advantages and disadvantages of their decision. Although some people likely will ignore this suggestion, it serves two purposes: 1) to provide investors with an honest rationale for why they are required to wait 24 hours, and 2) to at least encourage another method for slowing down their thinking. As a method of requiring such thinking more directly, investors could also be required to complete a set of questions of the sort described above.

In the case of the voluntary rescission period, investors would not be required to attend an additional meeting or find their way to a new web address in order to finalize their commitment (because this could pose an undue barrier to smart investing). Rather, at the end of the period, investors would be contacted by email and provided with a link for indicating their final decision. If they had reconsidered their decision, they could simply respond to the email by clicking a link to indicate that they were not opting to choose the investment. If they still wished to invest, they could simply ignore the email. If they chose to alter their decision (e.g., by investing more or less money in it or by choosing a different stock), they also would be able to indicate that preference (and would be offered a voluntary rescission period before finalizing it).

Variants

It would be possible to require these various “slow thinking” interventions separately, or in combination with each other. It also would be possible to require them only for personal investments meeting certain criteria determined by FINRA — such as investments involving large amounts of money or risky prospects (e.g., stocks). It would make the most sense to intervene for only a specific and limited set of financial decisions — i.e., decisions that are likely to reflect grandiose and/or impetuous thinking. For example, the brief hold could be applied to instances in which a person is deciding to invest a significantly larger amount of money than he or she ever has before.

Summary

In order to slow people’s thoughts so that they are better able to make quality investment decisions, they should be required to participate in interventions designed to slow down their thinking, such as taking private time to decide, or having a 30 minute hold before their decision can be finalized. During these periods, investors could be required to answer questions about the quality and details of their choice.

Intervention for The Future Self vs. The Present Self

Nature of Intervention

FUTURE COMMITMENT

Rationale

People tend to neglect their future financial circumstances because they tend to view their future selves as different people than their present selves. Our research has shown that people are often not inclined to defer financial rewards for larger, more distal ones. However, we also found that people are more likely to prefer more distant (but larger) rewards to smaller (but more proximate) ones when they are considering trade-offs between the *distant future versus near future* as opposed to between the *near future versus present*. That is, people are more willing to delay, or defer, financial rewards in exchange for larger ones when that delay or deferral will be experienced in the future as opposed to the present. Therefore, in order to encourage people to save money for the long term, we suggest encouraging them to make financial decisions that involve delaying or deferring financial rewards in the future (i.e., the near future) as opposed to in the present (i.e., the “right now”). In the former case, people should be more willing to agree to put money into long-term savings rather than to choose to have the money available for more present-oriented consumption.

Overview

We suggest that brokerage and banking websites have reminders encouraging people to save more by committing money from their future paychecks, rather than their current (or impending) ones. When a person opens a retirement account with one of these banks or firms, a reminder would appear encouraging him or her to commit to putting more into that account in the future. The reminder would contain a link to a page on the website where one could enroll in a “future savings” program. The program would work by allowing one to sign up to have a certain percentage of each of one’s monthly paychecks be deducted from checking and placed into a future savings account. The program would allow the user to choose to incrementally increase the percentage periodically (see Benartzi & Thaler, 2004) or to keep it level, and also to choose how often to increase the percentage. Such reminders could also be incorporated via employers’ HR departments, such that individuals would be provided with them when opening their work-based retirement accounts. Encouraging people to make financial decisions that do not immediately come into effect should encourage them to make more forward-looking financial decisions.

Details

When people log on to brokerage or banking websites (e.g., ING Direct, Bank of America, Vanguard), we suggest that advertisements be presented on the home page as well as on the page of the site where users can open or manage their bank and investment accounts. These advertisements would say: “Why don’t

“Why don’t you commit to putting more into savings in 6 months?”

Commit Now!

you commit to putting more into savings in 6 months?” with a button that says “Commit now!” By pressing the button, the investor would be taken to a page where they could make decisions about the amount of money they would put into their new account. Using this page, they would be given the option to keep the original percentage the same over time or to increase the percentage periodically. If they chose to increase the percentage of their paychecks they put into their savings account, they would have the option to choose by how much they would like to increase it (e.g. 2.5%, 5%, 10%, etc.) and how often they would like to increase it (e.g. monthly, biannually, annually, etc.). Their new account would be linked to their checking account in order to make these transfers possible.

Intervention for The Future Self vs. The Present Self, cont.

Moreover, each time the individual logged on to his or her checking account in the future, an encouraging reminder would appear suggesting the possibility of transferring future earnings into savings. If the individual elected to take this option, the money again would be automatically taken out of the investor's checking account each month and put into his or her savings account. This would of course be completely reversible or changeable, so that investors could change their decisions at any time

Variants

For those who use a traditional broker, the broker could set up the same automatic account for the investor. The broker could encourage the person to save more from future paychecks and would give the investor the same options the website would. In addition to reminders on the banking and brokerage websites, email encouragements could be sent to individuals who have an account with these banks and firms. The emails would contain the same message as the reminders on the websites and would also contain the link to the options page.

What percent of your paycheck do you currently put into savings? _____%

Would you like to increase the amount of money you place in your savings account each month?

Yes
 No

By how much would you like to increase that percentage?

1%
 2%
 3%
 Other ____%

How often would you like to increase that amount?

Monthly
 Semiannually (every six months)
 Annually
 Bianually (every two years)
 Not at all

Click to continue

Institutional human resources departments are also well set up to offer this option to employees with individual retirement accounts. Workers should be offered the option to commit to having a portion of their future paychecks be deposited for them into their IRA or 401(k), and they should be encouraged to make this commitment on behalf of future earnings, rather than present earnings. Thus, they should be given the chance to decide not only how much of their current paycheck (i.e., the one they are about to receive and likely already have plans for how they will spend) but also to decide for their future paychecks, such as the ones beginning six months from now (i.e., ones for which they likely to do not have specific plans yet in mind for how all of those earnings will be spent).

Summary

In order to get people to save more money, they should be encouraged and reminded to make financial decisions for near-future selves rather than immediate-present selves.

FURTHER READING

The Bias Blind Spot

- Pronin, E. (2007). Perception and misperception of bias in human judgment. *Trends in Cognitive Sciences*, 11, 37-43.
- Pronin, E., & Kugler, M. B. (2007). Valuing thoughts, ignoring behavior: The introspection illusion as a source of the bias blind spot. *Journal of Experimental Social Psychology*, 43, 565-578.
- Pronin, E., Lin, D. Y., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28, 369-381.

The Future Self vs. the Present Self

- Pronin, E., Olivola, C. Y., & Kennedy, K. (in press). Doing unto future selves as you would do unto others: Psychological distance and decision making. *Personality and Social Psychology Bulletin*.
- Pronin, E., & Ross, L. (2006). Temporal differences in trait self ascription: When the self is seen as an other. *Journal of Personality and Social Psychology*, 90, 197-209.

Fast Thinking

- Pronin, E., & Wegner, D. M. (2007). Induced mania: Psychological effects of thought acceleration. Manuscript under review.
- Pronin, E., & Wegner, D. M. (2006). Manic thinking: Independent effects of thought speed and thought content on mood. *Psychological Science*, 17, 807-813.