

WHAT BELIEFS ABOUT THE WORLD ARE ASSOCIATED WITH FRAUD VICTIMIZATION?







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Exposed to Scams

WHAT BELIEFS ABOUT THE WORLD ARE ASSOCIATED WITH FRAUD VICTIMIZATION?

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Key Learning

We examined whether the way people view the world is related to scam victimization. We found that viewing opportunity in a zero-sum fashion and believing that the world is unfair is associated with a greater likelihood of scam victimization.

Introduction

Broadly defined, scams are acts in which one party attempts to wrest money from another party through fraudulent, deceptive or coercive practices. Scams are a costly problem. The Federal Trade Commission (FTC) estimates annual losses as high as \$158 billion (FTC, 2024), yet costs go beyond financial, with many targets reporting severe stress, anxiety and depressive symptoms tied to scam victimization (FINRA Foundation, 2015). Educating consumers about scams is one method federal agencies, non-profits, retailers and other stakeholders use to help reduce the likelihood that people respond to scams. So, finding ways to improve the effectiveness of fraud prevention messaging could better protect consumers and possibly reduce related victimization rates.

A body of research links demographic, psychographic and contextual characteristics to scam victimization. For example, age, race, financial fragility and financial literacy are associated with scam victimization (Deevy et al., 2012; Morgan, 2021; DeLiema et al., 2019). Further, several studies have found that knowledge of scams and the tactics of fraudsters can also help protect consumers (FTC, 2024). However, while some research has explored psychological factors such as trust and impulsivity, little research has explored whether views about certain domains of our life experience, what we refer to at a high level as "mental frames," are tied to victimization rates.

The FTC estimates annual scam losses as high as \$158 billion The current study examined whether mental frames are empirically related to scam victimization. Specifically, we examine the following types of fraud: investment, lottery, phantom debt, employment, romance, advanced fee, government imposter and tech/ account (the Appendix contains the questions used to assess fraud victimization). Our exploration of how mental frames relate to scam victimization should, however, be viewed in a larger context that acknowledges that many factors influence how an individual might behave when confronted with a scam and, consequently, their risk of victimization (see Figure 1). That is, the current study does not examine all possible factors related to victimization by bad actors. Rather, we narrow our research questions to the following: Can mental frames predict scam victimization? If so, do mental frames predict scams, in this case, demographic factors?

FIGURE 1. The Scam Victimization Ecosystem



Mental Frames and Fraud

The current study builds on qualitative research that suggested mental frames—meaning the inner narratives that guide how we think about, view and react to money, people, power, authority and aspects of social life—could be related to scam victimization (Honick et al., 2021). Specifically, the researchers identified four mental frames that might influence or guide choices during scam encounters: compliance, opportunity, intelligence and order.

At various points in our lives, most of us feel the need to comply with requests, commands, rules or regulations. Whether completing school assignments, performing job tasks, following speed limits or paying taxes, cultural norms urge us to fulfill our obligations as citizens. Some people place a higher value on compliance than others. They might perceive that following the rules set by authority figures is necessary to avoid shame, earn social rewards or maintain the social order. Others might view compliance as optional, futile or even dangerous. For them, authority should be questioned and unwitting complicity is ill-advised.

HYPOTHESIS: People who hold the view that compliance is required are more susceptible to scam victimization.

👫 OPPORTUNITY

The opportunity mental frame shapes what an individual believes about the ways people create, acquire and maintain wealth. Specifically, some people might view wealth as a zero-sum game with clear winners and losers, while others might feel that wealth is infinite and available to anyone willing to pursue it.

HYPOTHESIS: People who view opportunity and wealth in a zero-sum fashion are more susceptible to scam victimization.

Our inner narratives about money, people, power and authority may influence our **vulnerability to scams**



In the hierarchy of human survival traits, intelligence is often viewed as important as physical strength. The ability to make sound decisions and grasp the deeper meaning of events is crucial to our wellbeing.

In social interactions, some people might worry that they will appear to lack intelligence; they might be guided by a narrative that urges them to appear smart to preserve their social status. As such, some people have the view that asking questions or checking with others before making a decision signals a lack of intelligence and, consequently, a vulnerability. An alternative view is that one gains intelligence (and therefore advantage) by remaining open to learning and asking many questions.

HYPOTHESIS: People who view asking questions and curiosity as a sign of weakness are more susceptible to scam victimization.

ORDER

The order mental frame may be one of the most fundamental in terms of culture and its influence on our thoughts and actions. Those who believe in a "just world" hold the perspective that there is an inherent and natural order that guides the universe. Good actions will be rewarded and evil ones punished—or, as we often hear, "what goes around, comes around." Individuals who believe in a just, orderly world might be more trusting of others. They might believe that people generally act in a moral way, and that when they do not, their behavior will be swiftly corrected and order restored. The inverse perspective of the order mental frame suggests that there is no guarantee of order or justice in the world. Instead, individuals are responsible for determining outcomes in their lives, whether good or bad. This view suggests that we must each take responsibility for our own fate. "Universal forces" or "divine fate," if they exist at all, are apathetic.

HYPOTHESIS: People who view the world as just are more susceptible to scam victimization.



Methods

MEASURING MENTAL FRAMES

We identified scales social science researchers currently use to assess views associated with the four mental frames (Table 1). It is important to note that while these scales align with our conceptualizations of the mental frames, they do not necessarily capture all the subtleties and dimensions of these worldviews¹ that are relevant in the fraud context.² Aside from the Generalized Self-Efficacy Scale (Schwarzer and Jerusalem, 1995) which is unidimensional, the other scales have more than one dimension— multiple factors that together represent the mental frame concept we are measuring.³

TABLE 1. Scales Used to Assess Respondents' Mental Frames

MENTAL FRAME	MEASURE
Compliance	Authority Behavior Inventory (Rigby, 1987)
Opportunity	Belief in a Zero-Sum Game Scale (Rozycka-Tran et al., 2015)
Intelligence	Generalized Self Efficacy Scale (Schwarzer and Jerusalem, 1995)
Order	Belief in a Just World Scale (Rubin and Peplau, 1975)



- ¹Throughout this brief, we use the words "views" and "worldviews" interchangeably to improve readability.
- ² In some instances, we did not use all the scale items. And we slightly changed the wording on some items in several instances because the language was dated.

³ To understand how these different factors relate to fraud victimization, we estimated the principal components within each scale and entered the components into the regression models separately.

MEASURING SCAM VICTIMIZATION

We asked respondents whether, over the past 12 months, they had money stolen from them through any of eight different types of scams: investment, lottery, phantom debt, employment, romance, advanced fee, government imposter and tech/ account. We curated the list based on scam types commonly used in scam/fraud studies using items from the Supplemental Fraud Survey the National Crime Victimization Survey by the Bureau of Justice Statistics (Morgan, 2021) developed, tested and administered. We also included a "catch all" question to identify respondents who self-reported victimization by a type of scam that we did not ask about. Respondents were given the options "No," "Yes," or "Don't know." (See the Appendix for the questions.) We constructed the final dependent variable as a binary variable (*i.e.*, a variable with two possible values) where "1" indicated that the respondent answered "yes" to one or more of the scam victimization questions and "0" indicated they did not. We collected demographic data on the respondents to use as covariates in the regressions.

SAMPLE

We collected data from 3,087 respondents via an online survey in October 2023. The nonprobability sample is quota-balanced by gender, race/ethnicity, education and income to reflect the U.S. adult population. Nineteen percent of the sample reported scam victimization in the previous 12 months.

19% of the sample reported scam victimization in the previous **12 months**

Findings

Overall, findings from regression analyses support the hypothesis that mental frames are associated with scam victimization, and this is true even after controlling for important demographic variables. However, this was true for only two mental frames—opportunity and order. We did not find a relationship between the intelligence mental frame and scam victimization.⁴ Similarly, we did not find a relationship between the compliance mental frame and scam victimization.⁵

OPPORTUNITY MENTAL FRAME (ZERO-SUM SCALE)

Table 2 shows self-reported scam victimization rates and predicted scam victimization rates (based on a regression that controlled for important demographic variables) by the degree to which respondents view the world in a zero-sum perspective (*i.e.*, a view within the opportunity mental frame). Respondents in Quartile 4 who strongly view the world from a zero-sum perspective report scam victimization at higher rates than those who tend not to view the world in a zero-sum fashion (Quartile 1). In fact, the respondents with the strongest zero-sum view of wealth and opportunity (Quartile 4) are nearly twice as likely to report victimization by a scam, relative to those with the weakest zero-sum view (Quartile 1). As seen in the third column, this relationship is true even after controlling for race/ethnicity, age, gender and income, though the predicted victimization rates are lower.

TABLE 2. Opportunity Mental Frame (Wealth Accumulation is a Zero-Sum Game) and
Scam Victimization

HAS ZERO-SUM PERSPECTIVE	SELF-REPORTED VICTIMIZATION RATE	PREDICTED VICTIMIZATION RATE AFTER CONTROLS
Quartile 1 (Low)	14%	14%
Quartile 2	19%	18%
Quartile 3	20%	19%
Quartile 4 (High)	25%	21%

ORDER MENTAL FRAME (JUST WORLD SCALE)

Our analysis of the Belief in a Just World scale as a proxy for the order mental frame indicated that there were three different ways respondents view the world—some tend to see the world as fair, some as unfair, and some have a more nuanced view where the world can be both fair and unfair.

⁴ We conducted a pilot study in March 2023. We found that the Self Efficacy Scale (the proxy for the intelligence mental frame) was not related to scam victimization and subsequently dropped it from the final survey

⁵ Logistic regression output is available from the authors upon request.

The World is Unfair

Although viewing the world as an unfair place was related to scam victimization, viewing the world as a fair place (belief in a just word) was not.

Table 3 shows scam victimization rates for the view that the world is unfair. As can be seen, those who have a strong view that the world is unfair (Quartile 4) are much more likely to report losing money to a scam (25 percent) than those who have a weak view that the world is unfair (18 percent and lower). The relationship holds (though is attenuated) after controlling for demographic variables.

VIEW WORLD AS UNFAIR	SELF-REPORTED VICTIMIZATION RATE	PREDICTED VICTIMIZATION RATE AFTER CONTROLS
Quartile 1 (Low)	17%	14%
Quartile 2	16%	14%
Quartile 3	18%	14%
Quartile 4 (High)	25%	21%

TABLE 3. Order Mental Frame (World is Unfair) and Scam Victimization

The World is Both Fair and Unfair

Respondents who have a more nuanced view of the fairness of the world—that is, it can be both fair and unfair—are less likely to report scam victimization (Table 4). More specifically, respondents in Quartile 4, that is, those who strongly believe the world can be both fair and unfair have a self-reported victimization rate of 14 percent. Conversely, respondents in Quartile 1, that is, those who have a weak belief that the world can be both fair and unfair have a self-reported victimization rate that is much higher (23 percent). Again, this relationship holds after controlling for demographic variables, as seen in column three.

TABLE 4. Order Mental Frame (World is Both Fair and Unfair) and Scam Victimization

VIEW WORLD AS BOTH FAIR AND UNFAIR	SELF-REPORTED VICTIMIZATION RATE	PREDICTED VICTIMIZATION RATE AFTER CONTROLS
Quartile 1 (Low)	23%	20%
Quartile 2	20%	19%
Quartile 3	19%	19%
Quartile 4 (High)	14%	15%

Why Might Mental Frames Relate to Scam Victimization?

This study found that two mental frames, or more specifically, the worldviews associated with these mental frames, are related to scam victimization. Believing that opportunity is a zero-sum game (within the opportunity mental frame) and believing that the world is unfair (within the order mental frame) are associated with increased levels of scam victimization, whereas believing that the world is sometimes fair and sometimes unfair (within the order mental frame) is associated with *decreased* scam victimization.

The two views associated with increased scam victimization appear to reflect more dichotomous thinking—that is, all or nothing thinking with an overreliance on certainty. The view within the order mental frame associated with decreased scam victimization—that is, that the world is sometimes just and sometimes unjust—on the other hand, reflects

Dialectical thinking is associated with decreased scam victimization.

dialectical thinking. Dialectical thinking is a more flexible form of thinking that can consider two opposing "truths" simultaneously, prioritizes exploration over certainty, and can accept opposing perspectives. Table 5 summarizes the links between mental frames and dichotomous versus dialectical views.

MENTAL FRAME	DICHOTOMOUS VIEW	DIALECTICAL VIEW
Compliance ⁶	Requests from authority are either always right or always wrong.	Requests from authority need to be questioned and evaluated.
Opportunity	Opportunity is a zero-sum game with clear winners and losers.	Opportunity requires a case- by- case evaluation.
Intelligence ⁷	Being certain is essential when making a decision.	Being analytical and comprehensive is essential when making a decision.
Order	The world is not just.	The world is sometimes just and, other times, not just.

TABLE 5. Mental Frames and Dichotomous/Dialectical Views

⁶ This mental frame was not statistically associated with scam victimization in the final version of the survey. ⁷ This mental frame, measured using the Generalized Self-Efficacy scale, was not statistically associated with scam victimization in the pilot survey.

We found views associated with dichotomous and dialectical thinking were related to scam victimization in different ways. Why might this be the case? If a person values dichotomous answers to questions and prefers that the world operate in a more certain and predetermined way, they might be more willing to "fill in the blanks" during a scam encounter to make something they want to be true, feel true. If they encounter a red flag or suspicious information that complicates an otherwise dichotomous (simple and safe) evaluation of a situation, they might ignore the red flag or explain it away rather than submit that the situation or decision might require additional analysis. So, views that reflect dichotomous thinking—for example, the opportunity mental frame of characterizing wealth as a "zero sum game" with clear winners and losers, and the order mental frame that the world is not just—could increase one's odds of victimization by a scam because they might lead people to accept things at face value.

> **Being comfortable with uncertainty**, a hallmark of dialectical thinking, could be beneficial when evaluating persuasive information.

Dichotomous thinking, because it often appears culturally appropriate, can play an insidious role in the scam interaction. For example, in research exploring the interaction of scammers and their targets (Honick et al., 2021), two former scammers based in India who perpetrated IRS scams⁸ suggested that they targeted Americans because Americans are likely to have strongly held beliefs about their government. The scammers leveraged the fact that many Americans believe that the government is both powerful and inherently better informed than citizens. A dichotomous thinker might default to this premise and respond with compliance despite encountering red flags such as being told that the "taxes" are due immediately and must be paid with a gift card, and that they need to stay on the phone and not tell anyone what they are doing until the "taxes" are paid. In another example from the same study, a woman ensnared by scammers who placed ads falsely promising high returns from an investment in a research project was dismayed when the scammers did not refund her money once she informed them that she was pregnant. Her belief that humanity draws a line to protect certain individuals instilled in her a sense of invulnerability around her decision to invest. Ultimately, dichotomous thinkers' mental frames may cause them to fill in the blanks as needed to preserve sacrosanct tenets that guide their lives.

On the other hand, views associated with dialectical thinking, like the view within the order mental frame that the world is both just and unjust, could lead people to recognize that regardless of what a person deserves based on how they treat others, some solicitations can be deceptive and harmful (*i.e.*, fraudulent) and others beneficial and legitimate. Therefore, all persuasive information should be carefully considered to determine the most likely outcomes. Stated another way, it may be less important *what* we think than *how* we think. That is, being comfortable with uncertainty, which is a hallmark of dialectical thinking, might be protective because it limits reliance on presuppositions and encourages people to fully examine a situation or an offer, which ultimately increases the likelihood that they will identify a red flag and, consequently, avoid victimization by a scam.

⁸What is often referred to as an "IRS scam" consists of scammers phoning individuals and posing as IRS agents who threaten to arrest the individuals if they don't immediately pay purported back taxes. The scammers often direct the individuals to provide numbers from gift cards they are instructed to buy at a local store.

Discussion

Some implications emerge regarding if and how this research could be used to help protect people from financial scams. Many of the variables that are related to fraud victimization are not readily changeable (*e.g.*, age). Mental frames, however, are malleable if individuals have the right exposure or incentive to entertain new ways of processing information in their daily lives (Rokeach, 1960; Wilson, 2011). One possibility is that protective narratives associated with dialectical worldviews could be woven into traditional fraud education communications. These narratives would emphasize the protective benefits of dialectical thinking (albeit in everyday, plain language). That is, that nuanced consideration is beneficial when evaluating persuasive information, and this can be particularly important when encountering a possible scam.

A successful messaging campaign might provide consumers with examples of how different thinking can lead to different results. The point is not that one worldview always leads to the "right" result and others do not. Rather, the odds of exploitation by scams might differ depending upon whether the consumer views the persuasion attempt through the lens of a dichotomous view or a dialectical view. Focusing on challenging or supporting the mental frames/views that consumers bring to scam encounters may prove to be a helpful addition to current educational efforts.

There are important limitations to this research. One is that this study relied on retrospective accounts of self-reported exploitation by scams. The experience of victimization might have altered the views associated with some respondents' mental frames. In addition, to our knowledge, this is the first study to establish an empirical link between the way people view the world and fraud exploitation. Replicating the study and using experimental methods to assess these relationships should be considered as future research in this area. Further, we found that mental frames and worldviews contribute to our ability to predict scam victimization above and beyond key demographic variables, but additional research could explore if this is true after controlling for some of the other factors associated with fraud exploitation that are summarized in Figure 1, like a target's routine daily activities.

There are also some important considerations. First, the views associated with mental frames, as we conceive them, are on a continuum and not binary. Further, mental frames and worldviews are expressed in different ways for different people. One view might take precedence over others based on the situation, or the effects of two or three views might come together to influence an individual's response to a scam at any given moment. Finally, while some worldviews might be associated with victimization by a scam, we do not suggest some are right and some are wrong. In fact, it could be that the same worldviews that this research suggests increase the likelihood of scam victimization might be beneficial or advantageous in other contexts and situations throughout one's life.

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Appendix

QUESTIONS USED TO ASSESS FRAUD VICTIMIZATION

- In the past 12 months, did you invest money with and lose it to a person or company that tricked you or lied to you about what you would receive, such as promising a guaranteed return on your investment or that you would not lose any money? This includes being lied to about a cryptocurrency investment that turned out to be fake.
- 2. In the past 12 months, did you pay money to receive a prize, grant, inheritance, lottery winning, or sum of money that you were told was yours but never received?
- 3. In the past 12 months, did you pay money to settle or pay off taxes or a debt, but you found out you were being tricked or lied to and the debt was not real or not yours?
- 4. In the past 12 months, did you pay money to get a job or get into a business opportunity but were tricked or lied to about how the money would be used or what you would receive in return?
- 5. In the past 12 months, did you donate, send, or otherwise give money to someone who PRETENDED to be someone they were not? This may have been a person who claimed to be a relative or friend, an associate of a relative or friend, or someone interested in you romantically.
- 6. In the past 12 months, did you pay money, such as taxes or a processing fee for a loan that you never received?
- 7. In the past 12 months, did you pay money to someone who lied and claimed they were with a government agency, such as the IRS, Social Security Administration, Medicare, the police, or some other government agency?
- 8. In the past 12 months, did you pay money to someone who lied and told you that you had a problem and that they were affiliated with a well-known business, such as Amazon, UPS, Microsoft, Apple, or a bank or financial institution?
- 9. Aside from what we've just asked you about, did you lose money to a scam in the past 12 months? We define a scam as a situation in which an individual or what appeared to be an organization used deception to intentionally take your money.

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