MARKETING IN THE CONSUMER’S INTEREST: FAIRNESS, VISUAL PERCEPTION, AND COGNITIVE PROCESSING

by

LANA KUREPA WASCHKA

(Under the Direction of Marcus V. M. da Cunha Jr.)

ABSTRACT

Pro-social behavior by companies and consumers plays an increasingly important role in marketing. Consequently, the way consumers perceive and think about their own or a company’s public interest activities have become significant factors in their decision making. To address these issues, I examine the related functions of pro-social behavior, visual perception, and consumer cognitive processing. Essay 1 demonstrates how positive consumer perceptions of justice in a company’s treatment of its employees can serve as a powerful marketing tool. The essay also considers how and when marketing messages based on a company’s justice toward its employees outperforms marketing messages based on corporate social responsibility. Essay 2 shows that magnification of food images can positively influence consumer attitudes toward healthy foods. This research suggests that companies selling healthy food would find consumers more responsive to magnified images and it also contributes to the policy options available to public health officials. Essay 3 examines how the use of cognitive processes, specifically, unconscious thought by consumers, can reduce the likelihood of consumers falling victim to fraudulent and scam offers that currently cost Americans more than three-quarters of a billion dollars annually.

INDEX WORDS: Prosocial marketing, Corporate Social Responsibility, Fairness, Organizational Justice, Magnification, Healthy Food, Unconscious Thought, Scams, Fraud

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DEDICATION

To my parents

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TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Socially responsible or prosocial marketing has interested nonprofit and for-profit organizations as well as researchers since at least the 1990s (Osterhus 1997). The related concept of corporate social responsibility (CSR) has also been investigated by Sen and Bhattacharya (2001), Rupp, Ganapathi, Aguilera and Williams (2006), Ellen, Webb, and Mohr (2006), Sen, Bhattacharya, and Korschun (2006), Chernev and Blair (2015), and Sen, Du, and Bhattacharya (2016) among others. Prosocial marketing has been defined as marketing that makes an appeal based on the organization's claimed empathy for others, concern for other's rights and welfare, or the organization's actions that benefit others (Hyllegard, Ogle, and Yan 2013).

This dissertation examines a broad conceptualization of prosocial marketing. First, I confront the effectiveness of certain kinds of prosocial marketing campaigns, specifically comparing CSR vs. organizational justice (OJ). I compare the much less-often used fairness or organizational justice appeal to typical CSR-based marketing campaigns to better understand the limitations of CSR appeals and to examine the potential of a new appeal tactic (OJ). Next, I investigate how certain marketing techniques can lead to healthier food choices by implementing aspects of visual design, specifically magnification to aid in consumer understanding of food choices. Finally, I explore how consumers can adopt different methods of processing to better identify and avoid scams and fraudulent offers. Taken together, these essays all examine different aspects of consumer well-being including employee justice, food choices, and scam identification. I begin by introducing a few definitions and concepts including fairness, organizational justice, corporate social responsibility – all related to the first essay -- visual perception, related to the second essay, and digital fraud, related to the third essay.

Organizational Justice and Fairness

Organizational justice has been defined as “the perceived adherence to rules that reflect appropriateness in decision contexts” (Colquitt and Zipay 2015, p.2). The industrial/organizational psychology literature describes three main types of justice: distributive, procedural, and interactional. Distributive justice concerns the appropriateness of the outcomes of particular decisions including equity, equality, and need (Adams 1965). Procedural justice deals with the organization’s procedures for making a decision especially with regards to an employee or an issue that relates to all employees (Leventhal 1980). Previous research that has examined the difference between distributive and procedural justice and found that procedural justice seems to be more related to general evaluations, whereas distributive is related to more specific outcomes (Lind and Tyler 1988; Moorman 1991). The third kind of organizational justice, interactional justice, concerns the level of respect and propriety during procedures (Bies and Moag 1986; Greenberg 1993).

“Fairness” is defined “as a global perception of appropriateness” (p.2) and is generally seen as shaped by perceptions of justice (Colquitt, Scott, Rodell, Long, Zapata, Conlon, and Wesson, 2013). In other words, perceived justice is an antecedent to fairness judgments.

Corporate Social Responsibility (CSR)

Organizational justice is important for employees’ loyalty and satisfaction and is distinct from corporate social responsibility (CSR) (Rupp, Ganapathi, Aguilera, and Williams 2006). CSR involves the company’s treatment of the environment, people, and organizations outside of the company. The Business Dictionary (2019) defines CSR as "A company's sense of responsibility towards the community and environment (both ecological and social) in which it operates" (p.1).

Organizational justice is a collection of a) internal actions impacting employees and b) actions required for the company to function, while CSR actions are a) external actions impacting non-employees and b) actions and activities in which the company need not engage. As Rupp, Ganapathi, Aguilera and Williams (2006) succinctly put it, CSR, unlike organizational justice, "…entails norms regarding the treatment of individuals, groups of individuals, and environments *external*, to the organization" (p.27).

Visual Perception

There are five main components of visual perception related to marketing: illuminance, shape, surface color, materiality, and location (Sample, Hagtvedt and Brasel 2020). The second essay involves visual perception, in particular, magnification. The concepts of magnification and location are related to each other in an important way. When a food image is magnified, the location of the image has been adjusted to appear relatively closer to a consumer than when it is not magnified. We explore the implications of image magnification/closeness related to food for consumers.

Digital Fraud

The advent of digital communication has opened up new avenues for fraud and scams. Direct emails, texts, and phone calls (which would have involved prohibitively expensive long-distance calls or mass mailings previously) have become constant potential avenues for marketing appeals for fraud and scams. These criminal activities, aimed at cheating consumers, cost Americans (alone) approximately three-quarters of a billion dollars annually (Deevy and Beals

2013; Pouryousefi and Frooman 2019). The third essay in this dissertation envisions consumer avoidance of such scam marketing attempts as a part of prosocial marketing.

Abstracts of the three dissertation essays addressing the main topic of prosocial marketing are given below.

Essay 1

Yes, But Are They Nice to Their Workers? Consumer Response to Fairness (and the (Ir)Relevance of Corporate Social Responsibility)

Previous marketing research on organizational justice (distributive, procedural, and interactional) has investigated the impact of one or more of those types of justice when consumers are the recipients of the justice decisions. Previous Organizational Behavior (OB) research has explored justice in the context of the relationship between the organization and the employee. This research explores whether a companies' positive organizational justice claims towards its employees can be an effective marketing tool to positively influence consumers. I also study the relationship between organizational justice towards a company's employees and a company's corporate social responsibility (CSR) activities. Through a series of five experiments, I find that a company's claims about positive organizational justice can be a persuasive tool to influence consumers. However, this work finds that not all types of justice are equally effective. Organizational justice messages based on interactional justice towards employees were consistently superior to distributive and procedural justice-based appeals. I show that these effects are mediated by consumer perceptions of a company's altruism. Four studies directly examine how CSR and organizational justice interact. The results of these studies show that the effects of CSR do not alter the impact of either high levels of organizational justice or low levels of organizational justice. These findings indicate a possible marketing alternative to CSR that could be effective, simpler, cheaper, less risky, and offer additional benefits beyond marketing effectiveness, such as employee satisfaction.

Essay 2

Enlarged for Health: Increasing Healthy Food Preferences Through Magnification

In this research, I examine how the design method of magnification can impact consumers' choice of healthier foods. Specifically, I posit that manipulating the magnification of healthy food items such that they appear larger than normal will increase perceptions of taste, quality, and preference by raising consumers' subjective comprehension of healthy food. In five studies, including an image-mining study that collected data from Instagram, I have found that magnified images of healthy food increase an overall combined perception of taste, quality, and preference by increasing subjective comprehension with this effect being moderated by perceptions of indulgence.

These findings provide several contributions to theory and practice. First, this research contributes to marketing literature related to health by showing that whereas healthy choices are more difficult to make, magnified images of food can increase subjective comprehension and improve decision-making results. Second, this research contributes to public policy by indicating a method through which public health officials can present food choices that can contribute to healthier consumer decisions. This work also contributes to research in the visual design domain by highlighting how a larger image size (magnification) can have a positive impact healthy food evaluations and preferences.

Essay 3

Saved by Distraction: (Un)Conscious Processing of Scams

Building on the findings of prior Unconscious Thought Theory (UTT) research, which showed how utilizing unconscious processing allowed participants to better identify lies (Reinhard, Greifeneder, and Scharmach 2011), the current work proposes a potential solution for consumers to overcome and identify complex scams and frauds: the use of distraction/ unconscious thought while processing information about scams. Through the course of three studies, I find evidence in support of the hypothesis and identify a moderated (relationship status) mediation (materialism) and that the main relationship is moderated by low self-esteem.

This work contributes to the literature by extending the application of unconscious thinking to situations of complex and costly scams and frauds. It contributes to theory by examining the relationship between materialism, low self-esteem, fraud victimization, and distraction/unconscious thought.

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CHAPTER 2

ESSAY 1

YES, BUT ARE THEY NICE TO THEIR WORKERS? CONSUMER RESPONSE TO FAIRNESS (AND THE (IR)RELEVANCE OF CORPORATE SOCIAL RESPONSIBILITY)[1]

[1] Waschka, Lana and Marcus Cunha Jr. To be submitted to *Journal of Consumer Research*.

Abstract

Previous marketing research on organizational justice, defined as “the perceived adherence to rules that reflect appropriateness in decision contexts” (Colquitt and Zipay, 2015 p. 2) and having three types: distributive, procedural, and interactional, has investigated the impact of one or more of those types of justice when consumers are the recipients of the justice decisions. Previous Organizational Behavior (OB) research has explored justice in the context of the relationship between the organization and the employee. This research fills the gap between these two streams of research by exploring whether a company’s positive organizational justice claims towards its employees can be an effective marketing tool. I also contrast and compare organizational justice and corporate social responsibility (CSR) as marketing tools. Through a series of five experiments, I find that a company’s claims about positive organizational justice can be a persuasive tool to influence consumers. However, I find that not all types of justice are equally effective. Organizational justice messages based on interactional justice towards employees were consistently superior to distributive and procedural justice-based marketing messages. I begin to explain certain mediating effects at work, specifically I find that the effect is mediated by consumer perceptions of a company’s altruism. Four studies directly examine how CSR and organizational justice interact. The results of these studies show that the effects of CSR do not alter the impact of either high levels of organizational justice or low levels of organizational justice. An additional study shows the strength of an organizational justice, marketing message when compared to a CSR marketing message regarding purchase intention, further supporting our central hypothesis. Our findings indicate a possible marketing alternative to CSR that could be effective, simpler, cheaper, less risky, and offer additional benefits beyond marketing effectiveness, such as employee satisfaction.

In 2018, *Newsweek* reported that since employees at Amazon could not meet the company-imposed target times if they took bathroom breaks, they resorted to urinating in bottles in the warehouse (Godlewski, 2018). In the same year, the Equal Employment Opportunity Commission sued Walmart for discrimination against its pregnant employees. There were complaints that Walmart punished or fired pregnant workers for taking time off for emergency treatment (Romo, 2018). Also, in 2018, reports about the mistreatment of workers who produce Apple products emerged, stating that Apple workers stood 10 hours per day handling noxious chemicals without proper protection (Elstrom, 2018). In 2019, former employees at IBM filed a highly publicized age-discrimination lawsuit against the company (Grant 2019). To address these issues, these companies have responded in various ways. Walmart and IBM are fighting the lawsuits, Apple is denying the charges, and, "In response to that type of criticism, Amazon just boosted its minimum wage to $15 an hour" (Cain 2018, p.3).

The examples above indicate that the manner in which companies treat their employees has come under increased scrutiny and criticism by current and former employees, social activists, journalists, and legal systems. From a managerial standpoint, the way companies treat their employees is broadly known as organizational justice. The literature on organizational justice describes three main types of justice: a) distributive, concerned with the appropriateness of the distribution of resources, equity, and with outcomes (Adams 1965; Leventhal 1976), b) procedural, concerned with the appropriateness of the decision process (Leventhal 1980), and c) interactional, concerned with the level of respect and propriety with which employees are dealt (Bies & Moag 1986; Greenberg 1993).

Considering the examples above, Walmart, IBM (both defending their processes in courts), and Apple (simply denying the charges) are not engaging in any action that addresses organizational justice issues. Amazon, alternatively, is responding to a process justice issue – the process for determining if a worker is doing a good job must be flawed if it requires urinating in a bottle -- with a change in distributive justice: the company will not change the process, but it will pay people more. Amazon is also airing commercials that highlight what they claim is their Corporate Social Responsibility (CSR) activity of using electric vehicles and their distributive justice: higher pay and money for college for their employees (Palmer 2021).

Research Questions

The increased scrutiny and these responses raise a number of questions that are relevant to marketing theory and practice. Although justice issues have been extensively researched in the Organizational Behavior (OB) literature with regard to employees, to the best of my knowledge there have been no investigations of consumer perceptions of organizational justice claims (related to employees – not customers) as a marketing tool.

Fundamental questions include: Do marketing claims of organizational justice in the treatment of employees influence consumers' willingness to purchase? If so, do marketing claims based on one type of organizational justice have a stronger impact on consumers' willingness to purchase compared to the other two? Also, are there conditions under which organizational justice effects on consumer persuasion can be amplified or diminished?

The OB literature provides evidence supporting the idea that organizational justice shapes employees' perception of the employer, but does a company's organizational justice towards its employees also affect consumer perceptions and purchasing behavior? The OB literature indicates that any of the three types of justice positively influence employees' perceptions of a firm (Jex and Britt 2014). Would the same be true for consumer perceptions of marketing messages based on different types of justice?

Turning to the marketing literature, I identify research involving organizational justice that ranges from Hulland, Nenkov, and Barclay's (2012) study of organizational justice as a critical factor in the relationship between marketing and sales departments in a company to research that examines the type of justice with which a company treats a customer with a complaint (Tax, Brown, and Chandrashekaran 1998). This literature helps to inform our research. As Hulland, Nenkov, and Barclay (2012) put it, citing Cobb, Vest, and Hills (1997), Maxham and Netemeyer (2003), and Tax, Brown, and Chandrashekaran (1998), "Justice has been traditionally conceptualized with the individual as the target and supervisors and/or the broader organization as the source…Research within marketing is consistent with this perspective, focusing on how individual customers' perceptions of justice following service failures affect their firm satisfaction" (p.452-453).

We study the intersection of organizational justice and marketing from a different angle. In this research, the consumer is not the target of justice, but rather an observer. The consumer is not the recipient of (in)justice from the company in the retail outlet, through a website purchase, on a phone call to the service department, or at the complaint desk. The consumer is, instead, the recipient of a message about the manner in which a company treats its workers (see Figure 2.1).

The marketing research area that closely relates to this conceptualization is corporate social responsibility (CSR). Typically, a limited number of potential consumers directly benefit from either a company's CSR or its organizational justice. However, generally speaking, consumers *observe* companies' CSR -- giving money to save the whales or to support the local children's baseball team. This similarity of consumer observation indicates the need to compare these two activities as potential marketing tools and raises these questions: How do marketing claims based on organizational justice and CSR interact? How do organizational justice claims fare relative to CSR in the eyes of the consumers?

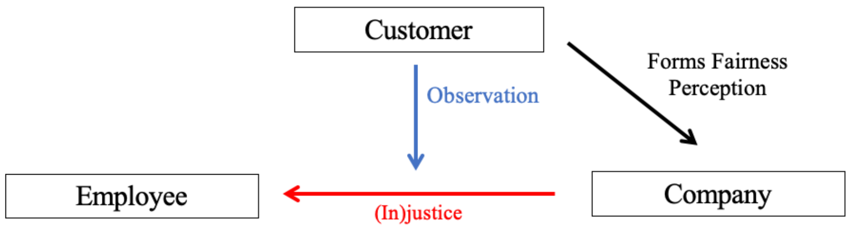

FIGURE 2.1

CONSUMER AS THE OBSERVER OF THE JUSTICE, NOT THE TARGET

Overview

In this manuscript, I argue that a company's claims of fairness towards its employees can positively influence consumers. I contend that organizational justice toward employees and marketing messages based on it are distinctively different from CSR. I also argue that, in many situations, organizational justice-based marketing messages could be simpler and more effective than CSR as a marketing tool.

Overall, I show that companies can benefit from a marketing standpoint by using specific fairness claims about the way they treat their employees. I also show that, in contrast to the OB literature, marketing messages based on certain types of organizational justice are more effective than others in eliciting positive consumer response, including willingness to purchase. I show that these effects are mediated by consumer perceptions of company altruism. Four studies directly examine how CSR and organizational justice interact. The first focused on differences in CSR "fit" with the organization, the second on company CSR generosity. The third explored firm reputation and the fourth focuses on intended consumer behavior. Through these studies, I find that the effects of CSR do not alter the impact of either high levels of organizational justice or low levels of organizational justice. High generosity in CSR activities cannot compensate for low interactional justice, with respect to consumers' purchase intention. In addition, higher levels of CSR giving by a company did not significantly improve consumer purchase intention when the level of organizational justice was high. I also found that high CSR fit was not enough to eliminate the negative effect of low organizational justice perceptions for consumers. These same trends hold when firm reputation is examined, OJ outperforms CSR when the firm has a "standard" reputation but neither OJ nor CSR can overcome a truly "bad" firm reputation. The final study shows that marketing messages based on OJ consistently outperform those that are based on CSR in convincing consumers to engage with a company by being willing to provide personal contact information.

This research contributes to the existing consumer behavior literature in several significant ways. It explores a new theoretical area by examining the marketing potential of organizational justice when the consumer is an observer, not the target of the justice. Our findings contribute to the literature on CSR in two areas. First, my results show that there are limitations to CSR's effectiveness when considered in the context of organizational justice. Second, our findings indicate a possible marketing alternative to CSR that could be effective, simpler, less risky, and offer additional benefits beyond marketing effectiveness, such as employee satisfaction. In addition, our research has significant practical implications for marketing strategy and organizational behavior.

Theoretical Background and Literature Review

Organizational Justice

Colquitt and Zipay (2015) define organizational justice as “the perceived adherence to rules that reflect appropriateness in decision contexts” (p.2). The industrial/organizational psychology literature describes three main types of justice: distributive, procedural, and interactional. Distributive justice has to do with the appropriateness of the outcomes of particular decisions. Aspects of distributive justice include equity, equality, and need (Adams 1965). In other words, do the final judgments rendered by management (regardless of what factors were taken into account or not) seem reasonably fair? Procedural justice deals with how appropriate the procedures are for making a decision and includes voice, consistency, accuracy, bias suppression, and correctability (Leventhal 1980). Put another way, did the process (itself – not the outcome) for dealing with an employee or issue seem fair? Previous organizational and social psychology research has examined the difference between distributive and procedural justice and found that procedural justice seems to be more related to general evaluations, whereas distributive is related to more specific outcomes (Lind and Tyler 1988; Moorman 1991). Interactional justice speaks to the level of respect and propriety maintained during procedures (Bies & Moag 1986; Greenberg 1993). An assessment of interactional justice is separate from the outcome and the process, and answers the question: Were the employees treated with politeness and respect? “Fairness” itself is defined “as a global perception of appropriateness” (p.2) and is generally seen as shaped by perceptions of justice (Colquitt and Rodell 2015). In other words, justice is an antecedent to fairness judgments.

The organizational justice literature has examined how employees form fairness perceptions and has proposed three different methods of information processing to arrive at a judgment of fairness: deliberative cognitive processing, heuristic cognitive processing, and affect-as-information. Leventhal's (1980) theory argued that people form fairness perceptions through a cognitive process wherein they decide to focus on certain justice rules and decide how much importance to place on each rule. Fairness theory argues, instead, that people use counterfactual thinking (Folger and Cropanzano 2001) in making these judgments. The assumption underlying both theories is that fairness judgments are based on a deliberative cognitive processing of decision events. In contrast, heuristic cognitive processing theory argues that fairness perceptions are formed quickly and do not rely on careful cognitive processing. Folger and Cropanzano (2001) claimed that, in certain situations, it is not possible to employ deliberative thinking, and people must resort instead to automatic processing. Another stream of research questions whether people even need to think in order to determine fairness perceptions (Colquitt and Zipay 2015). For example, Weiss and Cropanzano (1996) proposed the affect-as-information theory, which argues that any incident will elicit an automatic/immediate appraisal of the incident without any deliberate thought. Evidence from neuroscience experiments indicates that fairness is a factor of prime importance to humans and that we react strongly to perceptions of fairness and unfairness (Tabibnia, Satpute, and Lieberman 2008). This same study found that the reactive emotional activity happens in parts of the brain that are fast and automatic.

The in-company effects of justice have been well documented, with research showing that organizational justice is positively correlated with employee retention, organizational commitment, and organizational citizenship behavior. Interestingly, the organizational behavior literature has also found that even if only one of the three types of justice is clearly demonstrated to the employees by the company, then the employees are likely to believe that the organization is fair (Jex and Britt 2014).

Justice in Marketing Research

In the marketing literature, studies have examined the different responses to customer complaints and have found a significant difference in how procedural and interactional fairness impacts customer perceptions of an apology (Goodwin and Ross, 1992). Still, others found evidence that consumers who experience distributive and interactional justice are less likely to engage in negative word-of-mouth (Blodgett, Hill and Tax 1997). Prior research by Tax, Brown, and Chandrashekaran (1998) used justice theory to examine how satisfaction with complaint handling and prior experience shape customers' subsequent trust and commitment to the company. However, Tax, Brown, and Chandrashekaran (1998) focused only on complaint filing situations and found that whereas satisfaction with the complaint handling did directly impact trust and commitment in the company, prior positive experiences mitigate some of the effects of poor complaint handling.

The literature described above indicates that people respond differently to distributive, procedural, and interactional justice based on factors surrounding the justice situation. However, others argue for an overall positive effect of each type of justice on customer satisfaction. To illustrate, the marketing literature has shown that distributive justice perceptions have a positive impact on consumer satisfaction (Oliver and DeSarbo 1988), and that distributive and interactional justice have a positive impact on repurchase intention, and word-of-mouth decisions (Blodgett, Hill, and Tax 1997).

Work in organizational justice research has found a positive relationship between procedural justice and employee satisfaction (Greenberg 1990; Hillebrandt and Barclay 2017), whereas the marketing literature has found indirect support for the positive influence of procedural justice on customer satisfaction (Bitner, Booms, and Tetreault 1990; Taylor and Baker 1994). In a marketing context, interactional justice has been found to have a positive impact on customer satisfaction (Blodgett, Hill, and Tax 1997; Goodwin and Ross 1992).

The studies described above deal with companies treating consumers with a particular kind of justice. The research described in the current study seeks to understand the impact of marketing messages based on how a company treats its employees, not on how it treats consumers with complaints.

Combining the Two Streams of Research

I note that, from the organizational justice literature,

1) Regardless of which mechanism is at work (deliberative cognitive processing, heuristic cognitive processing, or affect-as-information), people react strongly to justice events (Tabibnia, Satpute, and Lieberman 2008) and are quick to make judgments about fairness (Folger and Cropanzano 2001; Colquitt and Zipay 2015).

2) The reaction of one worker to a justice incident can influence the judgment of other workers. Hillebrandt and Barclay (2017), citing the work of Jones and Skarlicki (2005), Lamertz (2002), Lind, Kray, and Thompson (1998), and Peters and Van den Bos, (2001 and 2008) noted that "research has shown that justice judgments are influenced not only by information about people's own treatment, but also by others' experiences of *their* treatment" (p.240, italics in the original). Hillebrandt and Barclay (2017) go on to find in their research on negative emotions that "others' emotions can influence individuals' own judgments of procedural justice and overall justice" (p.238). In other words, an observer of a justice event can be influenced by the event and the reactions of those involved. If one combines this information with the research showing people react strongly to justice events (Tabibnia, Satpute, and Lieberman 2008), and extrapolates this

finding to consumers, one can reasonably expect that consumers will be influenced by observing or learning about a company's organizational justice actions.

3) The marketing literature finds that consumers respond positively to various types of organizational justice when they are the target of the organizational justice in a complaint scenario.

Therefore, one can reasonably expect that consumers will make swift and strong judgments about a company's fairness, will be influenced by their perceptions, and will respond positively when they observe various types of positive organizational justice.

The consumer behavior setting, however, is different from the employee behavior context. Ambrose and Schminke (2003) indicate that context should influence the relative importance of different aspects of fairness and Tyler and Degoey (1995) show that the influence of procedural and interactional justice judgments varied across settings.

It remains unclear if there is a significant difference in consumer preference and likelihood to purchase based only on the different justice types of organizational justice a company claims. Given the conflicting results with some studies finding a strong reaction to each of the different types of justice for employees and the limited negative-reaction context of previous work related to marketing, I am unable to definitively say that one type of justice will be preferred by consumers. Therefore, I hypothesize the following:

H1: Marketing messages to consumers based on a company's positive (a) interactional justice, (b) distributive justice, and (c) procedural justice activities will have a positive impact on consumers' likelihood of purchase.

Altruism as a Potential Mediator

Previous managerial research has found that perceptions of overall fairness and justice are positively and significantly related to altruism (Tansky 1993). Since CSR shares the conceptualization we explore here, I turn to CSR literature for help in predicting mediation. Previous marketing literature found that company executives believed that CSR either contributed to profits or was altruistic, but not both (Fontana 2017). Rim, Yang, and Ying (2016), studying consumer-company identification in situations where companies engaged in CSR by partnering with a charitable nonprofit organization, confirmed the mediation effects of perceived altruistic motives. They also found that the perceived altruism associated with a CSR – nonprofit organization partnership "led to a significant increase in the level of identification between the consumer and a company" (p.3218). Marketing literature has also found that company altruism results in greater likelihood to purchase (Chernev and Blair 2015). As a result of these streams of research, I believe that consumer perceptions of company altruism will function as a mediator in the relationship between justice type and purchase intention. As a company increases its overall justice and fairness perceptions, company altruism perceptions will increase, leading to greater likelihood to purchase.

Therefore, I hypothesize:

H2: Altruism will mediate the relationship between marketing messages to consumers based on a company's (a) interactional justice, (b) distributive justice, and (c) procedural justice activities.

The overall conceptual model to be examined and tested in this research (see Figure 2.2) involves the impact of each specific type of justice (distributive, procedural, interactional) on consumer purchase intention and altruism as a mediator.

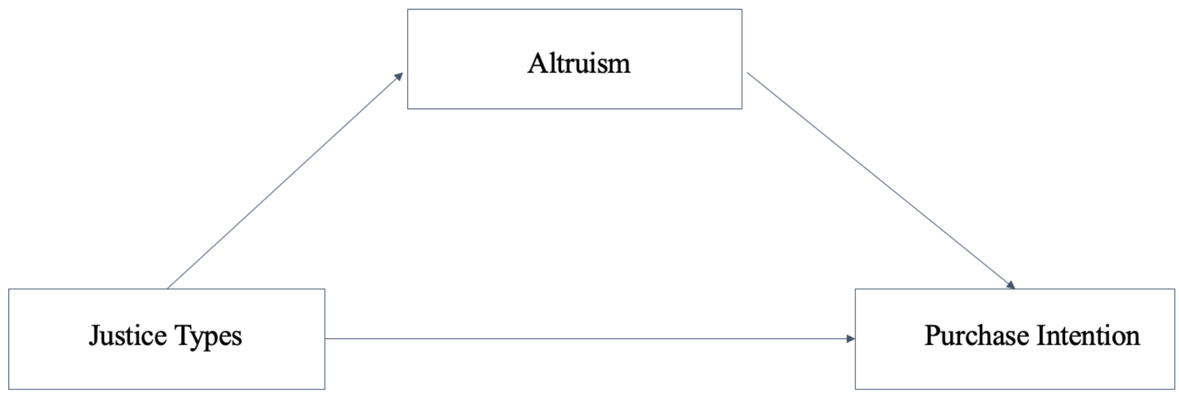

FIGURE 2.2

CONCEPTUAL MODEL

Differences between Organizational Justice and CSR

Organizational justice is important for employees' loyalty and satisfaction and is distinct from corporate social responsibility (CSR) (Rupp, Ganapathi, Aguilera, and Williams 2006). Definitions of CSR vary, but it is generally understood to involve the company's treatment of the environment, people, and organizations outside of the company. For example, the Business Dictionary (2019) defines CSR as "A company's sense of responsibility towards the community and environment (both ecological and social) in which it operates" (p.1). Whereas organizational justice is a collection of a) internal actions impacting employees and b) actions that must be engaged in for the company to function, CSR actions are a) external actions impacting non-employees and b) actions and activities in which the company need not engage in order to continue its business functions. For example, decisions to outsource production or not, which have clear impacts on company employees are part of organizational justice, not CSR. As Rupp, Ganapathi, Aguilera and Williams (2006) succinctly put it, CSR, unlike organizational justice, "…entails norms regarding the treatment of individuals, groups of individuals, and environments *external*, to the organization" (p.27).

CSR's Impact on Consumer Behavior

Whereas organizational justice and CSR are distinct topics, as noted above, they share the observer model of justice. There is literature to support the idea that CSR initiatives help the world and improve consumer attitudes towards companies and brands that use these marketing tactics (Ellen, Webb, and Mohr 2006; Gupta and Pirsch 2006; Nan and Heo 2007; Pracejus and Olsen 2004; Sen and Bhattacharya 2001). However, the success or failure of a CSR initiative is contingent on, and moderated by numerous variables. For example, the CSR issues that a company can successfully choose to engage in and support varies depending on how consumers perceive those causes. For example, when Coca-Cola gave money to the World Wildlife Fund to help protect polar bears, it found itself unexpectedly drawn into the global climate change debate with potentially negative consumer response (Vila and Bharadwaj 2017). Other studies have found that if consumers view the charitable cause/need to exist because of human error as opposed to nature or an "act of God," the emotional intensity of their response will vary (Lerner 1980).

Sen, Du, and Bhattacharya (2016) reviewed the CSR literature and summarized previous authors' contingencies. These include perceived motives of the company, perceived efficacy, CSR-company fit, company involvement, brand positioning, and firm reputation. Consumers can classify perceived motives as either intrinsic (the company expressing genuine concern for this issue) or extrinsic (the company hopes to maximize profit). In the past, consumers have been less tolerant of a company that seems to be extrinsically motivated, however, as consumers' understanding of CSR evolve, they tend to become more tolerant of a mix of intrinsic and extrinsic motivation (Porter and Kramer 2011). Perceived efficacy has also been found to impact consumers' perception of CSR activities undertaken by a company. If consumers do not believe or are uncertain if a brand is able to solve a problem with their CSR activity, consumers' brand preference decreases (Kuo and Rice 2015).

CSR-company fit is one of the most studied areas of CSR consumer research. The concept of fit is fairly complex and can involve multiple conceptual and perceptual dimensions. Generally speaking, the greater the fit between the company and the CSR activity, the more positively consumers respond to them (Simmons and Becker-Olsen 2006; Kuo and Rice 2015; Zdravkovic, Magnusson and Stanley 2010). However, CSR fit was found to be moderated by, for example, whether the perceived company motive was extrinsic.

Company involvement is defined as "donation amount in a customer relationship management (CRM) setting" (Sen, Du and Bhattacharya 2016, p71-72). Similar to CSR-company fit, company involvement positively affects consumer responses. However, there are interactions with company-specific and CSR-specific factors as well (Koschate-Fisher and Stefan IV 2012).

Brand positioning and firm reputation have also been shown to moderate consumers' responses to CSR. Consumers have been found to respond more favorably to CSR implemented by brands that are perceived as "stand-alone" rather than part of a larger umbrella of brands controlled by one company (Berens and van Bruggen 2005). Positive CSR effects have even been found to spillover to other categories of a brand that do not engage in the CSR behavior (Henderson and Arora 2010). Unsurprisingly, CSR responses were found to be more positive for companies with better reputations (Yoon, Gurhan-Canli, and Schwarz 2006). However, this does not hold for luxury brands because of a "mismatch between their self-transcendence associations with the former [CSR activities] and their self-enhancement associations with the latter [luxury goods]"

(Sen, Du and Bhattacharya 2016, p.72). In summary, the relationship between CSR and positive consumer response is complex, filled with moderators, potentially messy, and potentially risky.

Previous findings in CSR literature suggest that examining the interaction between CSR-company fit and organizational justice would be useful in establishing consumers' response when both are present or absent. I believe that CSR will have an additive effect on consumers' likelihood to purchase in conjunction with consumer perceptions of fairness resulting from company claims of organizational justice. Based on the findings summarized above, I hypothesize the following:

H3: (a) CSR-company fit and (b) company involvement will have an additive effect on consumers' likelihood to purchase when coupled with marketing messages to consumers based on a company's positive organizational justice interactional organizational justice.

H4: Firm reputation will moderate the effectiveness of both marketing messages to consumers based on a company's positive organizational justice activities and its marketing messages based on CSR activities.

Experiments

Overview

We examine the impact of organizational justice types on consumer likelihood to purchase and consumer company perceptions in a series of experiments. The first experiment investigates whether consumers' likelihood to purchase is significantly impacted by marketing messages based on a specific type of organizational justice (hypothesis 1).

The second and third studies focus on determining how CSR and interactional organizational justice interact with regard to CSR-company fit (study 2) and level of company involvement (study 3), respectively. The fourth study further builds on this relationship by examining how firm reputation changes the effectiveness of the justice claim. The final study aims to examine the proposed relationship in terms of subjects' willingness to provide personal information based on the marketing message. The primary aim of these studies was to begin to understand the relationship between consumer perceptions of a company that engages in both CSR and marketing with justice-based marketing messages to varying degrees.

The studies reported in this research test the impact of organizational justice on consumer perceptions in the context of supermarkets (experiment 1) and technology companies (remaining experiments). These product categories were chosen because of their universal familiarity, appeal, and utility. A fictitious brand was used in all experiments, which minimized any potential biases about specific brands.

Study 1

Study 1 aimed to demonstrate that a marketing message based on a company's organizational justice could significantly positively impact consumers' likelihood to purchase. It also tested whether an marketing message based on a specific single type of organizational justice would be effective and whether it would be equally effective as marketing messages based on other types of organizational justice. Specifically, I examined whether and which type of organizational justice information had an impact on a consumers' likelihood to purchase in the context of a supermarket.

Method

The design of the experiment was a between-subject factor with one control condition and four different types of justice (distributive, procedural, interactional, control, and all types together). Three hundred participants were recruited from an online panel. Each participant was asked to imagine a scenario in which they found a supermarket's employer statement and then were asked to answer questions about the company. The employer statement described how this company, “Supermarket X”, treats its employees. The control condition was as follows: “At Supermarket X, we believe in hiring the best talent and providing excellent opportunities for career development. It is important to us that we create the best work environment.” In the distributive justice condition the employee statement was “At Supermarket X, we believe that people doing the same job, regardless of individual differences, should earn the same base salaries. It is important to us that our employees receive this type of equal treatment” -- given that distributive justice focuses on equity. Procedural justice focuses on appropriate procedures and for that condition the employee statement was “At Supermarket X, we believe that it is important that we have procedures that are consistently applied across employees, free from bias, contain accurate information, and ethical. It is important to us that our employees know that our procedures are fair and consistent.” Interactional justice focuses on treating employees with respect and for that condition the employee statement was “At Supermarket X, we believe that all of our employees should be treated with politeness, dignity, and respect by all people within the organization. It is important to us that our employees know that we respect them.” We also included a benchmark condition that captured the essence of the three types of justice (distributive, procedural, and interactional) together. The message was as follows: “At Supermarket X, we believe that people doing the same job, regardless of gender or any other factor, should earn the same base salaries. We also have procedures that are consistently applied across employees, are free from bias, contain accurate information, and are ethical. We make sure that all of our employees are treated with politeness, dignity, and respect.”

I pretested the messages using a commercial online panel of participants to ensure that they conveyed equivalent positive valence. I presented each participant in the pretest with one of the five messages and asked them to evaluate how favorable they found the message. One hundred and twenty-five participants reported on seven-point Likert scales how favorable each message was (1 = “unfavorable,” and 7 = “favorable”). The results revealed that all organizational justice-type messages were perceived as equally favorable F (3,121) = 1.43, p =[n.s.], ($M_{\text{distributive}}$ = 5.51, SD =1.47; $M_{\text{procedural}}$ = 5.70, SD = 1.14; $M_{\text{interactional}}$ = 6.01, SD = 1.02; M_{control} = 6.06, SD =1.24). Based on the results of the messaging pretest, I was able to determine that none of the messages was more positively valanced than the others. Thus, it was appropriate to use these messages as stimuli for experiment 1 and experiment 2.

In study 1, after reading the employer statement, respondents were asked to evaluate willingness to purchase from the company on a 7-point scale with 1 = Strongly Disagree and 7= Strongly Agree. Participants’ willingness to purchase was evaluated using a modified evoked interest in brand scale (Zhao, Muehling, and Kareklas 2014). Participants also evaluated company perception measures with an altruism scale (Berman, Levine, Barasch & Small 2015). After the participants completed the measures they were asked manipulation check questions in order to ensure that they understood the type of justice about which they had just read.

Results

Purchase Intention

A one-way ANOVA on the purchase intention measure revealed that there is a statistically significant difference in purchase intention as a function of the type of organizational justice the company uses to communicate about how it treats its employees (F (4, 295) = 2.88 $p < 0.05$).

Pairwise comparisons revealed a significant difference between interactional justice and distributive justice with likelihood to purchase being significantly higher for interactional justice ($M_{\text{interactional}}$ = 6.05, SD = 1.22) rather than for distributive justice ($M_{\text{distributive}}$ = 5.55, SD = 1.42), t (121) = 2.09, $p < 0.05$. Interactional and procedural justices were also found to also have a statistically significant difference with likelihood to purchase being statistically significantly higher for interactional justice ($M_{\text{interactional}}$ = 6.05, *SD* = 1.22) than for procedural justice ($M_{\text{procedural}}$ = 5.57, *SD* = 1.35), t (117) = 2.04, $p < 0.05$. The control condition (M_{control} = 5.46, *SD* = 1.48) was found to be significantly different from interactional justice ($M_{\text{interactional}}$ = 6.05, *SD* = 1.22, t (117) = 2.45, $p <0.05$. The control condition (M_{control} = 5.46, *SD* = 1.48) was also found to be significantly different from the all justice condition (M_{all} = 6.06, *SD* = 1.27), t (117) = 2.38, $p < 0.05$.

This analysis also showed that there was not a significant difference in purchase intention between all the types of justice condition and interactional justice condition, ($M_{\text{interactional}}$ = 6.05, *SD* = 1.22; M_{all} = 6.06, *SD* = 1.27), t (121) = 0.04, [n.s.]). There was also not a statistically significant difference in purchase intention between procedural- ($M_{\text{procedural}}$ = 5.57, *SD* = 1.35) and distributive-justice types ($M_{\text{distributive}}$ = 5.55, *SD* = 1.42), t (118) = 0.08, [n.s.]. The control condition (M_{control} = 5.46, *SD* = 1.48) was also found to not have a statistically significant difference in purchase intention when compared to distributive justice ($M_{\text{distributive}}$ = 5.55, *SD* = 1.42), t (117) = 0.33, [n.s.]. or procedural justice ($M_{\text{procedural}}$ = 5.57, *SD* = 1.35, t (113) = 0.42, [n.s.] (See Figure 2.3.)

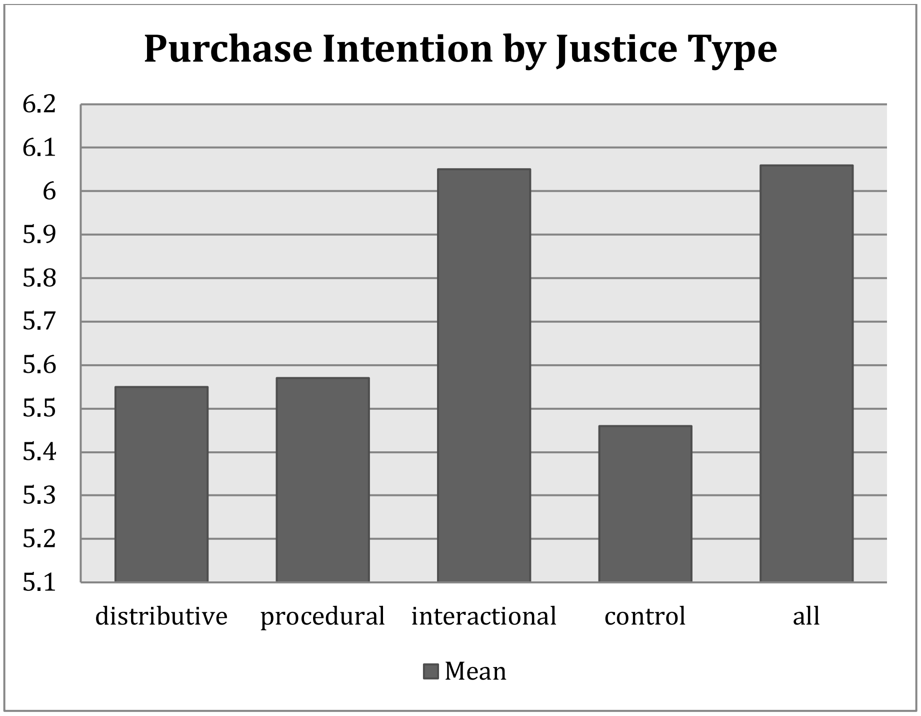

FIGURE 2.3

PURCHASE INTENTION BY JUSTICE TYPE

Company Altruism

A one-way ANOVA on the measure of altruism revealed that there is a significant difference in company altruism perceptions for consumers based on which type of organizational justice the company presents (F (4, 295) = 2.43, $p < 0.05$).

Interactional and distributive justice were found to have a marginally significant difference with company altruism perceptions being higher for interactional justice ($M_{\text{interactional}} = 5.79$, $SD = 1.37$) than for distributive justice ($M_{\text{distributive}} = 5.37$, $SD = 1.49$), t (121) = 1.63, $p = 0.09$. Procedural justice was not found to be significantly different from any other single type of justice. Pairwise comparisons revealed a significant difference between distributive justice and all types of justice, with altruism being statistically significantly higher for all types of justice condition ($M_{\text{all}} = 6.06$, $SD = 1.19$) compared to distributive justice ($M_{\text{distributive}} = 5.37$, $SD = 1.49$), t (122)

= 2.86, $p < 0.01$. The control condition $M_{\text{control}} = 5.49$, $SD = 1.26$) was found to be significantly different from the all justice condition ($M_{\text{all}} = 6.06$, $SD = 1.19$, $t\ (117) = 2.55$, $p < 0.05$). The control condition was not found to be significantly different from any other single type of justice.

Simple mediation through Altruism was also tested using PROCESS Model 1 (Hayes 2013) showed the indirect effect was significant ($b = .009$, SE = .04; CI = .02, 1.7) indicating mediation.

Discussion

This study demonstrated that marketing messages based on organizational justice can impact consumer purchase intentions compared to a control condition. It also showed that consumers prefer specific types of organizational justice to other types. Participants had a greater interest in purchasing from a company that exhibited interactional justice rather than distributive or procedural. Although all three types of justice discussed – interactional, distributive, and procedural – were shown to be equivalent in terms of their valence in the pretest, consumers showed greater interest in purchasing from a company that promised to treat their employees with respect and consideration (interactional) over those who had equity among employees (distributive) or appropriate procedures (procedural). Interactional justice was also not statistically different than a statement that considers the three types of justice altogether.

Based on the results of this study, it seems that consumers are equally likely to have an interest in purchasing from a company that employs distributive and procedural justice, with a clear and significant preference for interactional justice. When all types of justice were combined into one message type (the all condition), consumers were equally likely to have an interest in purchasing from a company that uses a marketing message based on all types of justice and a marketing message based only on interactional justice. Consumers do not consider one type of justice to be equal to another. In particular, it seems clear that interactional justice is by far the most effective at influencing intended behavior, and distributive and procedural justice-based marketing messages do little to increase the likelihood of a consumer purchasing from this company. The control condition was not found to be significantly different from either distributive or procedural justice in influencing purchase intention.

Why does interactional justice have much more appeal for consumers than other types of organizational justice? One possible explanation comes from the work of Blodgett, Hill, and Tax (1997). Studying re-patronage and word-of-mouth intentions of consumers who had a complaint about a product or service, they found that "higher levels of interactional justice can compensate for lower levels of distributive justice" (p.201). They also note that no amount of distributive justice can compensate for customers receiving low levels of interactional justice. They conclude that complainants may employ a two-stage process where the level of interactional justice acts as a "'cutoff' that determines whether the secondary criteria (i.e., distributive justice) is even taken into consideration" (p. 201). It may be that since consumers will not directly benefit from any secondary criteria (they are only observers), interactional justice serves as a "cutoff" and stand-in for the other types of justice. In other words, consumers figure that a company that treats its employees with respect and dignity will have fair procedures and distribute pay and credit fairly. This explanation fits with consumer responses to interactional justice in combination with CSR observed and discussed below.

Company altruism perceptions were also examined in this study. The results from this study suggest that demonstrating all types of justice conveys more altruism to the consumer than does a single type of justice. There was no significant difference between distributive, procedural, or interactional justice in terms of altruism perceptions in this study. Using PROCESS model 7, I tested moderated mediation. Company altruism perceptions were found to mediate the relationship between justice type and purchase intention. See Figure 2.4.

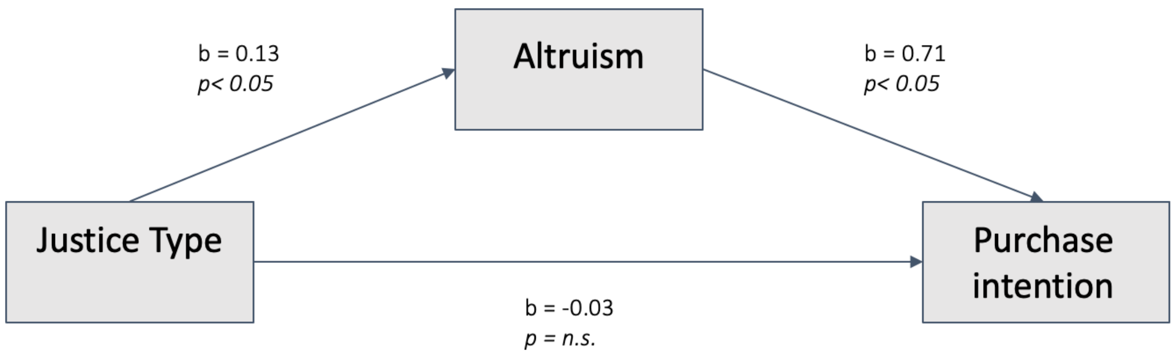

FIGURE 2.4

MEDIATION BY ALTRUISM PERCEPTIONS

(JUSTICE TYPE AND PURCHASE INTENTION)

Study 2

The goal of study 2 was to test whether CSR-company fit had an additive effect on consumers' likelihood to purchase when combined with interactional justice. Specifically, I aimed to show that CSR may have an additive effect when coupled with high interactional justice, but that high CSR-company fit could not offset low interactional justice in the mind of the consumer with respect to purchase intention. I examined this proposition in the context of a task that involves the participants reading a fictional investigative report on a technology company's organizational justice and CSR activities.

Method

The second study was a 3 (interactional justice level: high, low, control) x 2 (CSR-company fit: low, high) between-subjects design.

Three hundred twenty-five participants were recruited from an online panel. Each participant was asked to read an investigative report on a technology company's organizational justice and CSR activities. After, participants were shown information about how the technology company treats its employees as well as the type of CSR activity in which the organization engages. Then participants were asked to answer questions about the company. There were three different employee justice statements. The high interactional justice condition was the same as in previous studies, whereas the low interactional justice condition had the words "does not" in front of the interactional justice statement. The control statement did not explicitly include information on justice and instead said the following "An investigative report found that Technology Company X abides standard labor practices. It is important to the company that they legally follow industry standards". CSR-company fit was manipulated as either "high" or "low" by having the company donate to a technology literacy program for the elderly or a healthy eating initiative. The former was the high fit condition, while the latter was the low fit (see Figure 2.5).

After reading the description, respondents were asked to evaluate willingness to purchase from the company on a 7-point scale with 1 = Strongly Disagree and 7= Strongly Agree. Participants' willingness to purchase and company altruism perceptions were measured using the same scales as the first experiment.

Employee Justice Statements	**High** An investigative report found that Technology Company X treats all their employees with politeness, dignity, and respect throughout the organization. It is important to the company that the employees are treated with respect.	**Low** An investigative report found that Technology Company X does not treat all their employees with politeness, dignity, and respect throughout the organization. It is not important to the company that the employees are treated with respect.
Company Fit	**High** The report also found that Technology Company X is a sponsor of Technology Training Programs for the Elderly. They donate a percentage of their revenue to this worthy cause aimed at helping elderly people navigate current technology to improve their quality of life.	**Low** Technology Company X was also found to be a sponsor of the Healthy Eating Research Association. They donate a percentage of their revenue to this worthy cause aimed at helping people make healthier eating decisions

FIGURE 2.5

STIMULI FOR HIGH AND LOW CONDITIONS IN STUDY 2

Results

The results reported below examine the relationship between interactional justice and company CSR fit. An analysis of all justice and company CSR fit found that there was not a significant interaction between the two variables on purchase intention. However, altruism perceptions were found to be significantly different.

Purchase Intention

The main effect of interactional justice was found to be significant (F (2,319) = 125.62, p < .001) whereas company CSR fit was not significant (F (1,319) = 2.17, p =.14). (See Figure 2.6.)

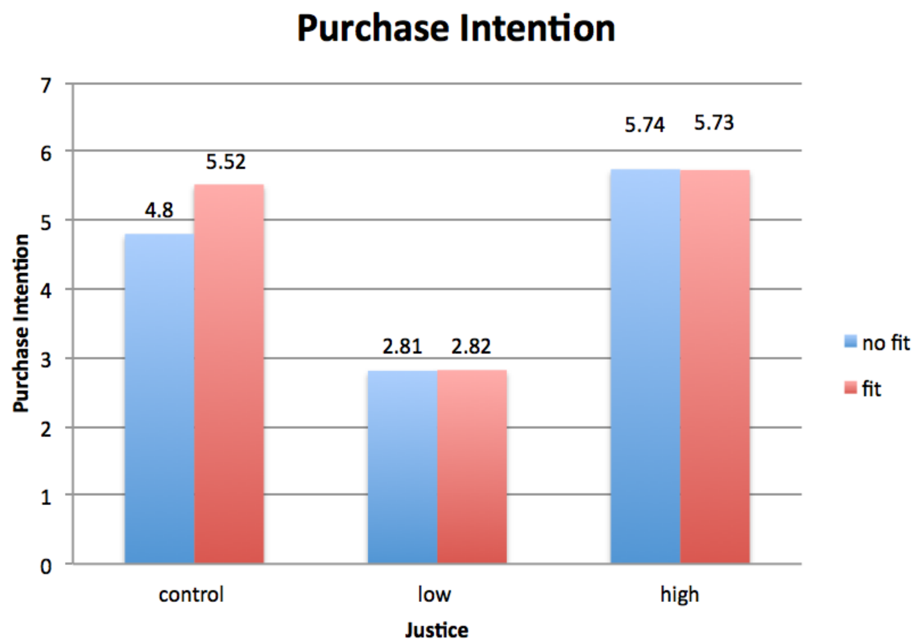

FIGURE 2.6

PURCHASE INTENTION, INTERACTIONAL JUSTICE, AND CSR FIT

The interaction effect for justice and company CSR involvement was found to not be significant, F (2,319) = 4.64, p =0.11. There is a significant difference between high interactional justice and low interactional justice, in the no fit company CSR condition ($M_{\text{no\_fitCSR, low\_interactional}}$ = 2.81, SD = 1.62) vs. ($M_{\text{no\_fitCSR, high\_interactional}}$ = 5.74, SD = 1.22), t (104) = 10.49, p <0.0001. There is also a significant difference between high interactional justice and control condition, in the no fit company CSR condition ($M_{\text{no\_fitCSR, high\_interactional}}$ = 5.74, SD = 1.23) vs. ($M_{\text{no\_fitCSR, control}}$ = 4.80, SD = 1.64), t (101) = 3.30, p <0.001. There is also a significant difference between low interactional justice and the control, in the no fit company CSR condition $M_{\text{no\_fitCSR, low\_interactional}}$ = 2.81, SD = 1.62) vs. ($M_{\text{no\_fitCSR, control}}$ = 4.80, SD = 1.64), t (103) = 6.25, p <0.001.

In the fit CSR condition there was a significant difference between low interactional justice and the control condition ($M_{\text{fitCSR, low\_interactional}} = 2.81$, $SD = 1.62$) vs. ($M_{\text{fitCSR, control}} = 5.52$, $SD = 1.27$), $t\,(109) = 9.83$, $p < 0.001$. In the fit CSR condition there was also a significant difference between low interactional justice and high interactional justice ($M_{\text{fitCSR, low\_interactional}} = 2.82$, $SD = 1.47$) vs. ($M_{\text{fitCSR, high\_interactional}} = 5.72$, $SD = 1.37$), $t\,(109) = 10.75$, $p < 0.001$. However, high interactional justice was found to not be significantly different from the control condition in the high company CSR condition ($M_{\text{fitCSR, high\_interactional}} = 5.73$, $SD = 1.37$) vs. ($M_{\text{fitCSR, control}} = 5.52$, $SD = 1.27$), $t\,(111) = 0.85$, $p = 0.40$.

The pairwise comparisons revealed that there was a significant difference in fit and no fit company CSR activities in the control justice condition ($M_{\text{fitCSR, control}} = 5.52$, $SD = 1.27$) vs. ($M_{\text{no\_fitCSR, control}} = 4.80$, $SD = 1.64$), $t\,(106) = 2.57$, $p < 0.05$ however in the low justice condition ($M_{\text{fitCSR, low\_interactional}} = 2.81$, $SD = 1.68$) vs. ($M_{\text{no\_fitCSR, low\_interactional}} = 2.81$, $SD = 1.62$), $t\,(107) = 0.00$, $p = 1.00$ and in the high interactional condition there was no significant difference between purchase intention for fit or no fit CSR ($M_{\text{fitCSR, high\_interational}} = 5.72$, $SD = 1.37$) vs. ($M_{\text{no\_fitCSR, high\_interactional}} = 5.74$, $SD = 1.22$), $t\,(106) = 0.08$, $p = 0.93$.

Company Altruism

The main effect of interactional justice was found to be significant while CSR fit was found to not be significant. Interactional justice yielded an F ratio of $(2, 319) = 227.03$, $p < 0.001$ and CSR fit yielded an F ratio of $(1, 319) = 2.18$, $p = .14$. Generally, company altruism perceptions follow the same pattern as purchase intention.

The interaction effect for justice and company CSR involvement was found to be significant, $F\,(2{,}319) = 3.41$, $p < 0.05$. There is a significant difference between high interactional justice and low interactional justice, in the no fit CSR condition ($M_{\text{no\_fitCSR, low\_interactional}} = 2.79$, *SD* = 1.41) vs. ($M_{\text{no\_fitCSR, high\_interactional}}$ = 6.11, *SD* = 0.96), t (104) = 14.12, p <0.001. There is also a significant difference between high interactional justice and control condition, in the no fit CSR condition ($M_{\text{no\_fitCSR, high\_interactional}}$ = 6.11, *SD* = 0.96) vs. ($M_{\text{no\_fitCSR, control}}$ = 5.30, *SD* = 1.30), t (101) = 3.60, p <0.001. There is also a significant difference between low interactional justice and the control, in the no fit CSR condition $M_{\text{no\_fitCSR, low\_interactional}}$ = 2.79, *SD* = 1.41) vs. ($M_{\text{no\_fitCSR, control}}$ = 5.30, *SD* = 1.30), t (103) = 9.47, p <0.01.

In the fit CSR condition there was a significant difference between low interactional justice and the control condition ($M_{\text{fitCSR, low\_interactional}}$ = 2.75, *SD* = 1.30) vs. ($M_{\text{fitCSR, control}}$ = 6.01, *SD* = 1.16), t (110) = 14.01, p <0.001. In the high company CSR condition there was also a significant difference between low interactional justice and high interactional justice ($M_{\text{fitCSR, low\_interactional}}$ = 2.75, *SD* = 1.30) vs. ($M_{\text{fitCSR, high\_interactional}}$ =6.04, *SD* = 1.29), t (109) = 13.38, p <0.001. However, high interactional justice was found to not be significantly different from the control condition in the fit CSR condition ($M_{\text{fitCSR, high\_interactional}}$ =6.04, *SD* = 1.14) vs. ($M_{\text{fitCSR, control}}$ = 6.01, *SD* = 1.16), t (120) = 0.97, p = 0.33.

The pairwise comparisons revealed that there was a significant difference in fit or no fit CSR actions in the control justice condition ($M_{\text{fitCSR, control}}$ = 6.01, *SD* = 1.16) vs. ($M_{\text{no\_fitCSR, control}}$ = 5.30, *SD* = 1.30), t (106) = 4.22 p <0.001 however, there is no significant difference in the low justice condition ($M_{\text{fitCSR, low\_interactional}}$ = 2.75, *SD* = 1.30) vs. ($M_{\text{no\_fitCSR, low\_interactional}}$= 2.79, *SD* = 1.41), t (107) = 0.15, p =0.88. There was also no significant difference in the high interactional condition there was no significant difference between purchase intention for fit or no fit of company CSR ($M_{\text{fitCSR, high\_interational}}$ = 6.04, *SD* = 1.29) vs. ($M_{\text{no\_fitCSR, high\_interactional}}$ = 6.11, *SD* = 0.96), t (106) = 0.323, p =0.75.

Discussion

This study shows that company fit with CSR activities (how well matched a company and the company they donate to are), and the degree of interactional justice positively affects consumers' likelihood of purchase. The results of this study confirm certain prior findings that a company with a CSR initiative that fits with the company business, results in more positive evaluations of the company and likelihood to purchase (Koschate-Fisher and Stefan IV 2012).

However, this study does show that CSR fit does not impact the likelihood to purchase when justice perceptions are included. For example, in both low interactional justice conditions, it makes no difference to consumers if a company's CSR fits with the company. CSR fit was not found to ameliorate negative consumer perceptions based on poor interactional organizational justice. The same is shown for high interactional justice. Consumers are shown to significantly prefer high organizational justice, but there is no difference in their preference for purchasing from the company if the CSR fits or does not fit with the goal of the organization. This seems to suggest that the presence of organizational justice impacts consumers' response to established CSR consumer outcomes and that if consumers perceive the company as being highly just to their employees, CSR fit becomes irrelevant.

Altruism followed the same trend as purchase intention for consumers. Companies are perceived by consumers as most altruistic when they engage in high interactional justice and CSR that fits the company. However, as with likelihood to purchase, CSR was not able to compensate for poor organizational justice.

Overall, this study seems to suggest that when information about a company's justice practices is present, CSR fit no longer plays a significant role in consumer purchase intentions or perceptions of company altruism.

Study 3

The goal of study 3 was to test whether company involvement in CSR giving had an additive effect on consumers' likelihood to purchase when combined with interactional justice. Specifically, I expected that company involvement (how much a company donates to a cause) might have an additive effect when coupled with high interactional justice but that high company involvement in CSR activities could not offset low interactional justice in the mind of the consumer with respect to purchase intention. I examine this proposition in the context of a task that involves the participants reading a fictional investigative report on a technology company's organizational justice and CSR activities.

Method

The third experiment was a 3 (interactional justice level: high, low, control) x 2 (Company involvement: low, high) between-subjects design.

Three hundred eighty-nine participants were recruited from an online panel. Each participant was asked to read an investigative report on a technology company's organizational justice and CSR activities. After, participants were shown information about how the technology company treats its employees as well as the CSR activity in which the organization engages. Then participants were asked to answer questions about the company. There were two different employee justice statements and one control statement. These were the same as in the previous experiment. The participants were also informed that the company had revenue of $200 million dollars in the vignette. Company involvement was manipulated as either high or low by having the company donate either $5,000 or $5,000,000 to a cause. The former was the low company involvement condition while the latter was the high company involvement condition.

After reading the description, respondents were asked to evaluate willingness to purchase from the company on a 7-point scale with 1 = Strongly Disagree and 7= Strongly Agree. Participants' willingness to purchase and company altruism perceptions were measured using the same scales as the first and second experiment.

Results

The results reported below examine the relationship between interactional justice and company CSR involvement. An analysis of all justice and company CSR involvement found that there was a significant interaction between the two variables on both purchase intention and altruism perceptions of the company.

Purchase Intention

The main effects of interactional justice and company CSR involvement were both found to be significant. Interactional justice yielded an F ratio of (2, 383) = 126.44, p <0.001 and company CSR involvement yielded an F ratio of (1, 383) = 9.31, p <0.01.

The interaction effect for justice and company CSR involvement was found to be statistically significant, F (2,383) = 6.32, $p < 0.01$. Pairwise comparisons show a significant difference between low company CSR and high company CSR in the control condition ($M_{\text{lowCSR, control}}$ = 4.94, SD = 1.41) vs. ($M_{\text{highCSR, control}}$ = 5.48, SD = 1.20), F (1,383) = 9.81, p <0.05. There was also a significant difference between low company CSR and high company CSR in the low justice condition ($M_{\text{lowCSR, low\_interactional}}$ = 2.39, SD = 1.25) vs. ($M_{\text{highCSR, low\_interactional}}$ = 3.40, SD = 1.68), F (1,383) = 32.36, p <0.05. However, there was not a significant difference between low and high company CSR in the high justice condition ($M_{\text{lowCSR, high\_interactional}}$ = 5.55, SD = 1.50) vs. ($M_{\text{highCSR, high\_interactional}}$ = 5.31, SD = 1.40), F (1,383) = .90, p = n.s.

Company Altruism

The main effects of interactional justice and company CSR involvement on purchase intention were both found to be significant. Interactional justice yielded an F ratio of (2, 383) = 157.26, p <0.001 and company CSR involvement yielded an F ratio of (1, 383) = 16.94, p <0.001. Generally, company altruism perceptions follow the same pattern as purchase intention.

The interaction effect for justice and company CSR involvement was found to be significant, F (2,383) = 6.43, p < 0.005. Pairwise comparrisons of the analysis revealed a significant difference between low and high company CSR in the control condition ($M_{\text{lowCSR, control}}$= 4.92, SD = 1.38) vs. ($M_{\text{highCSR, control}}$ = 5.56, SD = 1.03), F (1,383) = 10.15, p <0.005. There is also a significant difference between low and high company CSR in the low justice condition ($M_{\text{lowCSR, low\_interactional}}$ = 2.51, SD = 1.02) vs. ($M_{\text{highCSR, low\_interactional}}$ = 3.48, SD = 1.36), F (1,383) = 19.56, p <0.05). However, as with purchase intention, there was not a significant difference between low and high company CSR in the high justice condition ($M_{\text{lowCSR, high\_interactional}}$ = 5.51, SD = 1.40) vs. ($M_{\text{highCSR, high\_interactional}}$ = 5.41, SD = 1.13), F (1,383) = .22, p =n.s.

Discussion

This study shows that company involvement (how much a company donates to a cause) and degree of interactional justice positively affect consumers' likelihood to purchase. However, I also show that when interactional justice is low, even a company with high CSR cannot overcome the negative effects on consumers' purchase intention. In contrast, no significant difference was found between low company CSR and high company CSR in the high interactional justice condition. This suggests that if consumers perceive a company as being highly just to their employees, the level of CSR the company engages in is irrelevant to consumers. Additionally, I verify previous literature by showing that under a control justice condition (i.e., the absence of any justice information), the more CSR a company engages in results in a greater likelihood to purchase by consumers.

Altruism followed the same trend as purchase intention for consumers. Companies are perceived by consumers as most altruistic when they engage in high interactional justice and high company CSR. While not surprising, it does support the additive effect that CSR has to altruism perceptions. Interestingly, as with purchase intention, high company CSR (in this condition, participants were told a company gave five million dollars to a worthy cause) could not compensate for low interactional justice in terms of perceived altruism.

Overall, this study suggests that justice may be weighed more heavily by consumers than CSR and suggests that future studies should continue to more completely identify if, how, and when a company's CSR is more important than its organizational justice as a marketing message to consumers. It would also be worthwhile to see if all types of justice give these same results. In this study interactional justice alone was manipulated because in Study 1 and Study 2 it was found to have the most positive impact on purchase intention. Perhaps high company CSR would be able to compensate for low procedural justice (the consistently lowest rated justice) since consumers seem to not find it particularly important.

Study 4

The goal of study 4 was to test whether company reputation had an effect on consumer purchase intention when a company engaged in different types of activities (OJ vs. CSR). Specifically, I expected that company reputation (how an unbiased third party evaluated the company) will impact the effectiveness of both OJ and CSR claims, but that OJ will still outperform CSR even with a negative company reputation. I examine this proposition in the context of a task that involves the participants reading a fictional investigative report on a technology company's organizational justice and CSR activities as well as company reputation reports.

Method

The fourth experiment was a 2 (activity: OJ vs. CSR) x 3 (Company reputation: negative, average, positive) between subjects design.

Five hundred twenty-four participants were recruited from an online panel. Each participant was asked to read an investigative report on a technology company's organizational justice and CSR activities. After, participants were shown information about the technology company's reputation (either positive, negative, or average). (See Figure 2.7.) Then participants were asked to answer questions about the company regarding purchase intention.

Company Reputation	Information Provided
High General Reputation	An unbiased investigative report and found that Technology Company X is a well-regarded company with a very positive reputation.
Control General Reputation	An unbiased investigative report and found that Technology Company X is a standard company with an average reputation.
Low General Reputation	An unbiased investigative report and found that Technology Company X is not a well-regarded company with a very negative reputation.

FIGURE 2.7

COMPANY REPUTATION STATEMENTS FOR STUDY 4

After reading the description, respondents were asked to evaluate willingness to purchase from the company on a 7-point scale with 1 = Strongly Disagree and 7= Strongly Agree.

Participants' willingness to purchase and company altruism perceptions were measured using the same scales as the previous experiments.

Results

Purchase Intention

The interaction effect for company activity (OJ vs. CSR) and company reputation was found to be significant, $F\,(2{,}518) = 3.11$, $p < 0.05$. Pairwise comparisons of the interaction showed a significant difference between a OJ and CSR in the standard company reputation condition ($M_{\text{standard\_rep,OJ}} = 5.36$, $SD = .92$) vs. ($M_{\text{standard\_rep, CSR}} = 5.00$, $SD = 1.21$), $F\,(1{,}518) = 4.39$, p <0.05.

However, there was not a significant difference between OJ and CSR in either the good company reputation ($M_{\text{good\_rep,OJ}} = 5.69$, $SD = 1.06$) vs. ($M_{\text{good\_rep, CSR}} = 5.43$, $SD = 1.06$), F $(1{,}518) = 2.45$, $p = 0.12$ or in the bad company reputation ($M_{\text{bad\_rep,OJ}} = 4.20$, $SD = 1.09$) vs. ($M_{\text{bad\_rep, CSR}} = 4.40$, $SD = 1.22$), $F\,(1{,}518) = 1.39$, $p = 0.24$.

Discussion

This study shows that company reputation and activity the company engaged in (OJ vs. CSR) has a significant effect on consumer's likelihood to purchase, when the firm reputation is "average". When a firm reputation is either "negative" or "positive" this study shows that neither OJ nor CSR activities can significantly impact consumers wiliness to purchase from this company. No significant difference was found between "negative" and "positive" firm reputation in either OJ or CSR. This suggests that if consumers perceive a company as having either a very good or very bad reputation, the level of CSR the company engages or the level of OJ is irrelevant to consumers. Overall, this study suggests that firm reputation may be weighed more heavily by consumers than either type of activity in which they engage (OJ or CSR).

Study 5

The goal of study 5 was to test whether there was a significant consumer behavioral difference between a company engaging in CSR giving and a company engaging in interactional justice. Specifically, I measured the participants' willingness to provide personal information by asking if they would share their emails to receive information on companies similar to the one described in the study. I expected the results to follow what studies 1 through 4 had previously established, that OJ would outperform CSR. I examine this proposition in the context of a task that involves the participants reading a fictional description of a technology company's organizational justice or CSR activities.

Method

The fifth experiment was a 2 (marketing message: OJ vs. CSR) between-subjects design.

Two hundred fifty participants were recruited from an online panel. Each participant was asked to read a short message about either a company's organizational justice or CSR activities. Specifically, for the justice condition participants were told that employees were treated with politeness, dignity, and respect throughout the organization. In the CSR condition participants were told that the company was a sponsor for natural disaster relief around the country.

After reading the description, respondents were asked to rate their willingness to provide additional information (their email) to receive further information about the company on a 7-point scale with 1 = Not Interested and 7= Very interested. Participants' perceptions of the company's favorability, likability, and interest in purchasing were measured using the same scales as the prior experiments.

Results

An analysis of the difference in consumer response to company justice claims vs. company CSR claims found that there was a significant main effect on providing additional information, favorability, and positivity towards the company. A marginally significant effect was found for future purchases from the company.

Additional Information

A one-way ANOVA revealed a significant difference between OJ and CSR with likelihood to provide more information being significantly higher for OJ ($M_{\mathrm{OJ}} = 3.88$, $SD = 2.17$) rather than for CSR ($M_{\mathrm{CSR}} = 3.26$, $SD = 1.93$), $F\ (1, 248) = 5.78$, $p < 0.05$.

Favorability

A one-way ANOVA revealed a significant difference between OJ and CSR with company overall favorability being significantly higher for OJ ($M_{\mathrm{OJ}} = 5.58$, $SD = 2.39$) rather than for CSR ($M_{\mathrm{CSR}} = 5.08$, $SD = 1.37$), $F\ (1, 248) = 8.31$, $p < 0.005$.

Positive View Of Company

A one-way ANOVA revealed a significant difference between OJ and CSR with positive view of company being significantly higher for OJ ($M_{\mathrm{OJ}} = 5.58$, $SD = 1.45$) rather than for CSR ($M_{\mathrm{CSR}} = 5.20$, $SD = 1.36$), $F\ (1, 248) = 4.47$, $p < 0.05$.

Future Interest

A one-way ANOVA revealed a significant difference between OJ and CSR with future purchase intention being marginally statistically significantly higher for OJ ($M_{\mathrm{OJ}} = 5.47$, $SD = 1.55$) rather than for CSR ($M_{\mathrm{CSR}} = 5.14$, $SD = 1.47$), $F\ (1, 248) = 3.09$, $p = 0.08$.

Discussion

This study shows that marketing messages based on OJ consistently outperform those that are based on CSR in convincing consumers to engage with a company by providing personal contact information. I find a significant difference in likelihood to provide information in order to receive additional information from the company. I also find the results regarding company favorability, likability, and interest in purchasing from them to be consistent with previous studies. In all measures OJ outperforms CSR, either significantly or marginally. This suggests that when consumers perceive a company as being highly just to their employees they are more willing to provide additional information, view the company more favorably, and be more likely to purchase from them. Overall, this study suggests that justice may be more persuasive and appealing to consumers when compared with CSR.

General Discussion

This research makes contributions in three main areas. First, it shows a strong positive connection between marketing messages based on organizational justice and consumer behavior. Unexpectedly, it shows that not all types of organizational justice are equal. It connects consumer behavior with organizational justice -- not in response to a specific negative customer experience, but considering organizational justice as the basis for a marketing message. Second, it examines the mediating effects at work in organizational justice marketing messages to consumers. Third, it begins to explain the relationship between marketing messages based on organizational justice and CSR with potentially profound impacts on our understanding of CSR in a consumer behavior context.

In the first area, this research shows that marketing messages based on a company's claim of positive organizational justice can have a significantly positive impact on consumers' purchase intention beyond that provided by a control message. Furthermore, I show that not all types of organizational justice are equally effective as the basis for this marketing message. Interestingly, an interactional justice-based message by itself is clearly most compelling for consumers. A marketing message based on all three types of organizational justice is just as convincing for consumers, but marketing messages based on distributive justice or procedural justice are no more compelling than a control statement.

In the second area, altruism was found to mediate the relationship between justice and purchase intention. This research indicates that marketing messages based on organizational justice make a significant impact on consumer perceptions of a company's altruism and further impact purchase intention.

Third, this research suggests that justice is more important for consumer purchase intention than CSR in at least two main situations. When interactional justice levels are high and when they are low, CSR levels are not significantly relevant. When justice levels are perceived by consumers to be low, neither high levels nor low levels of CSR make a difference to consumers. High levels of CSR contributions do not offset low justice level perceptions. When justice levels are high, there is not a significant difference in consumer attitudes whether a company is engaged in low or high levels of CSR contributions. In other words, when interactional justice is perceived to be high, a company that gives $5,000,000 in CSR is viewed no more favorably than a company that gives $5,000 in CSR contributions.

Fourth, I identify a potential boundary condition in terms of the effectiveness of either OJ or CSR activity, firm reputation. When firm reputation is average OJ outperforms CSR however, when the firm reputation is either negative or positive neither OJ nor CSR can overcome the firm's reputation.

The findings in this area suggest that organizational justice -- an activity in which companies must participate – could, in certain circumstances, substitute for the positive effects of corporate social responsibility, an optional activity that can cost considerable time and money.

Managerial Implications

The managerial implications of this work include potential impacts for company marketing campaigns in terms of what aspects of company justice to highlight with the clear advantage to interactional justice. There are clear implications for marketing strategy as well, suggesting that strategies that employ expensive CSR might be reconsidered and interactional justice-based messages to consumers substituted. In addition, this research has implications in the area of organizational behavior, suggesting that one of the most important marketing activities a company can engage in is interactional justice, which could have the added advantages cited in the organizational behavior literature.

Limitations and Future Work

This research did not take into account the potential effects of "social accounting". Social accounting, "explanations provided by the organization for its actions, which can to some degree mitigate effects of perceived unfairness" (Rupp, Ganapathi, Aguilera, and Williams 2006, p 541) could allow organizations a way to change perceptions of actions considered unjust. (Cropanzano, Byrne, Bobocel, and Rupp 2001). Such social accounting could impact the effectiveness of OJ- or CSR-based marketing messages. Other limitations of this work include primarily measuring purchase intention as the dependent variable, exclusive use of online subjects, frequent use of vignettes rather than directly involving subjects, and focusing on a broad conceptualization of CSR rather than examining its multidimensional attributes.

Future studies could test the impact of cognitive load and ego depletion on consumer response. A test of cognitive load as a potential moderating effect could prove important, especially if certain types of organizational justice maintain their impact on consumer behavior under high cognitive load. A study that features ego depletion could be similarly useful. It might produce an improved response to interactional-justice-based marketing messages and would be interesting if it produced an improved response to procedural-justice-based marketing messages. Another area of interest for future work could be examining if there is a difference in consumer response to justice-based messages between manufactured products vs. services.

Finally, it could be useful to create studies in which there is a test to determine if there is a boundary condition for the benefits of marketing messages based on justice, especially interactional justice. This research could attempt to determine if there is a negative impact to messages that consumers perceive as exemplifying "too much" organizational justice.

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CHAPTER 3

ESSAY 2

ENLARGED FOR HEALTH:

INCREASING HEALTHY FOOD PREFERENCES THROUGH MAGNIFICATION[2]

[2] Waschka, Lana and Kevin L. Sample. To be submitted to *Journal of Consumer Research*.

Abstract

In this research, I examine how an aspect of visual design, specifically magnification, can impact consumers' choice of healthier foods. I posit that manipulating the magnification of healthy food items such that they appear larger than normal will increase perceptions of taste, quality, and preference by raising consumers' subjective comprehension of healthy food. In five studies, including an image-mining study that collected data from Instagram food images, I have found that magnified images of healthy food increase an overall combined perception of taste, quality, and preference by increasing subjective comprehension with this effect being moderated by perceptions of indulgence.

These findings provide several contributions to theory and practice. First, this research contributes to marketing literature related to health by showing that whereas healthy choices are more difficult to make, magnified images of food can increase subjective comprehension and improve decision-making results. Second, this research contributes to public policy by indicating a method through which public health officials can present food choices that can contribute to healthier consumer decisions. This work also contributes to research in the visual design domain by highlighting how a larger image size (magnification) can have a positive impact healthy food evaluations and preferences.

In 2018, the obesity rate in the United States topped 40%, a rate that had been increasing over the preceding decade (Center for Disease Control and Prevention 2021). Although this statistic may not be surprising, the extent of its negative impact on consumers financially, physically, and mentally might be. Obesity has been linked to preventable diseases such as Type-2 diabetes, heart disease, and numerous cancers. These diseases, in turn, result in increased medical bills, depression, and younger mortality (Milaneschi, Simmons, van Rossum, and Penninx 2019). Even with clear evidence of the significant damage that an unhealthy diet and obesity can have on people, consumers are often biased and tend to favor unhealthy options (Chance, Gorlin and Dhar 2014). This raises two questions. First, why do people continue to make unhealthy food decisions? And second, how can marketers present healthier foods in ways that encourage consumers to make better choices and overcome the consumer predilection for unhealthy food products?

I suspect that one potential reason consumers prefer unhealthy food products is a limited understanding of health information (Cowburn and Stockley 2005). Past research has indicated that consumers find health information complicated, which can ultimately affect their decision-making (Kristal et al. 1998; Emrich, Qi, Mendoza, Lou, Cohen, and L'Abbe 2014; Ahmed, Oh, Vanderlee, Franco-Arellano, Schermel, Lou, and L'Abbé 2020; Dubois, Albuquerque, Allais, Bonnet, Bertail, Combris et al. 2021). One way that researchers have addressed this issue has been through visual design, such as the intervention of traffic light labeling (e.g. green is healthy, yellow is semi-healthy, and red is unhealthy). This intervention improved healthy food and beverage choices amongst participants (Thorndike, Sonnenberg, Riis, Barraclough, and Levy, 2012; Sonnenberg, Gelsomin, Levy, Riis, Barraclough, and Thorndike 2013; ; Ikonen, Sotgin, and Audinli 2019) and has been incorporated into health-based apps such as MyFitnessPal and Noom

Coach (Dredge 2016). This stream of research leads me to consider the question, are there other visual design methods that marketers can use to nudge consumers into making healthier choices?

In this research, I examine how the design method of magnification can impact consumers' choice of healthier foods. Specifically, I posit that manipulating the magnification of healthy food items such that they appear larger than normal will increase perceptions of taste and impact preference by raising consumers' subjective comprehension of healthy food. In five studies, including an image-mining study that collected data from Instagram, I have found that magnified images of healthy food increase perceptions of taste, quality, and preference by increasing subjective comprehension with this effect being moderated by the perceived indulgence of the food.

These findings provide several contributions to theory and practice. First, this research contributes to marketing literature related to health by showing that whereas healthy choices are more difficult to make, magnified images of food can increase subjective comprehension and improve decision-making results. Second, this research contributes to public policy and the tools available to public health officials by indicating a method through which consumers can better understand food choices, leading, in turn, to healthier consumer decisions. Third, this research contributes to the understanding of the role of indulgence by showing the moderating effect of the perception of indulgence on attempts to present healthy food in a positive light.

Conceptual Background

Healthy vs. Unhealthy Food

Consumers often find it difficult to choose healthy foods for a variety of reasons. Healthy food is often viewed as inferior in taste and less enjoyable (Raghunathan, Naylor and Hoyer 2006), more expensive (Haws, Reczek and Sample 2017), requiring more effort (Dijker 2019) and self-control (McCarthy and Liu 2017) to consume it. By comparison, many consumers see choosing unhealthy food as the default option (Chance, Gorlin, and Dhar 2014).

This difference is well established with past literature showing that there are significant differences in how consumers respond to, understand, and select healthy vs. unhealthy food (Wang, Zhang and Jiang 2022; Turnwald and Crum 2019). Previous research has examined these differences and offered various explanations. Choosing unhealthy food requires little comprehension and leads to immediate pleasure (Chance, Gorlin, and Dhar 2014), unlike the much more mentally taxing decision to choose a healthier option. In order to make it easier for consumers to choose healthy food and overcome the unhealthy default choice, we hypothesize that consumers would need to have a better understanding of the healthy alternative. Prior research has established that improving knowledge and understanding can contribute to more healthy food decisions by consumers. Researchers have investigated this problem by manipulating food labels through visual design and manipulating attributes (e.g., taste) (Thorndike, Sonnenberg, Riis, Barraclough, and Levy 2012; Turnwald and Crum 2019; Sonnenberg, Gelsomin, Levy, Riis, Barraclough, and Thorndike 2013) in an attempt to increase food knowledge and nutritional understanding.

In an attempt to motivate consumers not to select the unhealthy default option, marketers and policymakers have promoted greater education (Niebylski, Lu, Campbell, Arcand, Schermel, Hua, Yeates, Tobe, Twohig, L'Abbé, and Liu 2014), consumer involvement (Gustafson, Abbey and Heelan 2017), and knowledge (Pieniak, Verbeke and Scholderer 2010). This research has suggested that it is necessary to teach consumers not only *what* to choose but also *how* to choose healthy options (Dunleavy 2019; Just and Gabrielyan, 2016). In addition, some researchers make arguments for governmental and legal interventions, including taxation, bans, and litigation (Hodge, Garcia, and Shaw 2008; Rhode 2015). However, even with these attempts, contradictory nutritional messages still confuse consumers (Nagler 2014) and key metrics such as obesity levels remain on the rise (Centers for Disease Control and Prevention 2021), highlighting the continued relevance and importance of food choice related marketing research.

The Role of Visuals in Choosing Healthy Food

Consumers perceive much of their information about products and services through visual stimuli (DelVecchio, Jae and Ferguson 2018). These visual stimuli include images (still and moving), graphics (including text and font), and overall visual design. Consequently, visual perception has constituted an important part of marketing theory and practice for many decades. Since 1970, hundreds of articles have been published on visual processing, atomistic visual perception, and holistic visual perception related to marketing in journals (Sample, Hagtvedt, and Brasel 2020). Visual cues have been found to play a leading role in influencing consumers' food choices and evaluations (Biswas, Labrecque, Lehmann, and Markos 2014; Chandon and Ordabayeva 2009; Hoegg and Alba 2007) mainly because individuals interact with visual cues before engaging other senses such as the olfactory or auditory (Herz and Engen 1996).

Previous work found that many different factors can influence a consumer’s food choice, including other people’s body type (Dhar and Wertenbroch 2000), self-control (Baumeister 2002; Kivetz and Simonson 2002), and “affective/cognitive” states (Shiv and Fedorikhin 1999). There are also other design attributes that have been investigated, including the use of text size (Pillai, Katsikeas, and Presi 2012) to the effect of color lightness on food consumption (Madzharov, Ramanathan, and Block 2016).

The current work explores the possibility of using other visual marketing techniques to influence consumer behavior. We investigate the impact of image-related manipulation by examining image magnification.

Magnification

One of the five compositional elements of visual perception is location – the placement of a focal visual element in relation to other visual information (Sample, Hagtvedt, and Brasel 2020). When a food image is magnified, in essence, the location of the image has been adjusted to appear relatively closer to a consumer than when it is not magnified. As has been shown with other elements of visual perception such as volume and container shape (Raghubir and Krishna 1999), our research indicates that image size can significantly impact consumer perception, interpretation, and response to a product. We now consider the potential implications of magnification and the resultant increase in perceived comprehension in consumers. We begin by examining the literature regarding the magnification of text and continue by exploring the findings for magnification of images.

Consumers who see text in an advertisement experience two types of comprehension: objective comprehension and subjective comprehension. Pillai, Katsikeas, and Presi (2012) investigated the impact of increasing the size of the text in an advertisement on consumer comprehension of the message. They found that the subjective - receiver based - comprehension of an advertisement improves significantly when the text is made larger. In other words, larger text stimuli caused consumers to believe that they understood the advertisement copy better. The authors suggest that the larger text gives the impression of being easier to understand, similar to the function of large text in a children's book. Importantly, this subjective comprehension also leads to a positive feeling towards the product. This same benefit is not observed in objective comprehension, which the authors find is not "sufficient for high-involvement persuasion" when there is no favorable elaboration (Pillai et al. 2012 p.865).

Beyond text font size, previous research has also shown that pictures communicate more universally than text (Nodelman 1988) and improve comprehension (Katz, Kripalani, and Weiss 2006). This effect, sometimes referred to as the picture superiority effect (PSE), is well documented (Hockley 2008). In a marketing setting, research has shown that even when consumers have size and/or weight information available to them about a product in text, people rely on visual estimations to determine the amount of product being offered (Chandon and Wansink 2012).

Since larger text has been shown to lead to greater subjective comprehension in an advertisement context and positive feelings towards the product (Pillai, Katsikeas, and Presi 2012), I consider the role of comprehension in this area.

Comprehension

Comprehension of any task, object, or even person typically makes it easier to interact with them. For example, students have been shown to perform better on tasks when they comprehend the material as opposed to having doubts (Gickling and Armstrong, 1987; Treptow, Burns and McComas 2007).

Several researchers (Mick 1992, Ratneshwar and Chaiken 1991, and Stewart 1986) noted that the comprehension of a message is the antecedent of persuasion. Greenwald and Leavitt (1984) created a framework consisting of four stages of message processing: pre-attention, focal attention, comprehension, and elaboration. For low-involvement persuasion, comprehension is probably sufficient (Percy and Rossiter 1997). For an action such as food choice, elaboration will usually be a component because such a decision requires "imagining events related to the content of the message (imagery), and actively supporting or disagreeing with a persuasive message (cognitive responding). Elaboration serves to establish memory traces in which message content is integrated with existing propositional knowledge" (Greenwald and Leavitt 1984, p. 588). In the case of food choice, consumers would need to imagine events related to the content of the message (Would that product taste good? Be of high quality? Be expensive?), actively agree or disagree with the marketing message, and connect the advertisement with previous experiences of the same type of food or similar foods.

Therefore, based on the research of Pillai, Katsikeas, and Presi (2012), which found that subjective comprehension improves significantly when the text is made larger and the work of Mick (1992), Ratneshwar and Chaiken (1991), and Stewart (1986) who found that comprehension of a message is the antecedent of persuasion, I predict that magnification of healthy food images will follow the same pattern as text. I expect it will increase viewer's comprehension of the food and that the resulting comprehension will mediate the relationship between consumers and healthy food choices. Since larger text leads to greater comprehension, it is plausible to make the inference that the same benefit would be felt by magnifying images.

Indulgence

For those consumers who would prefer a healthy food option, another factor can come into play: the perception of indulgence. Indulgence has been studied in various consumer behavior contexts including travel (Koc, Ar and Aydin 2017), food (see below), and clothing (Li and Mousseaux 2013) purchases. The concept of indulgence is "closely related to both luxury and hedonics, often involving spending on items perceived as luxuries relative to one's means; these items are typically hedonic rather than utilitarian" (Kivetz and Simonson 2002 p.199). Therefore, indulgent food products could be unhealthy, unhealthy and expensive, or they could be healthy and expensive.

Previous research has found counterintuitive results with regard to the presence of healthy or unhealthy food as options for consumers. Wilcox, Vallen, Block & Fitzsimons (2009) found that the presence of a healthy choice among food options leads to an increased likelihood that consumers will choose an indulgent food compared to when a healthy food is not available. More recently, Sullivan, Fitzsimons, Platt, and Huettel (2019) found that introducing an irrelevant indulgent food into a choice can encourage more disciplined choices by consumers. In addition, consumers often believe that healthy food is expensive and the "healthy = expensive" intuition has been shown to impact consumer decision making (Haws, Reczek and Sample 2017).

Given that consumers could perceive some healthy food as indulgent because they could believe it to be very expensive or something they do not eat because it seems too "fancy" or "special", such as venison, escargot, caviar, or quail, I expect that participants' perception of indulgence will have a moderating effect on the results. Those who view a food item as indulgent may be less likely to have an overall positive evaluation of the magnified image of a healthy food because they believe it to be expensive, "fancy" unusual, or in some other way indulgent.

Hypotheses

I designed five studies to test the hypotheses that healthy magnified foods increase perceptions of taste, quality, and preference when compared to unhealthy alternatives. I also expect this effect to be moderated by indulgence perception and mediated by comprehension. I predict that unhealthy magnified food will not benefit from magnification because consumers already understand the characteristics of unhealthy food. More specifically, I hypothesize that preference for healthy food will significantly increase as a result of magnification of the food items, whereas preference for unhealthy food will not be affected by the effect of magnification. I expect this difference as a result of how unhealthy and healthy foods are generally comprehended by consumers. Consumers find unhealthy food to be the default and easy to understand option whereas healthy food requires more cognitive processing to understand its benefits. I test this hypothesis in

Study 1, which considers both healthy and unhealthy foods. After establishing that unhealthy foods see no significant increase in preference by consumers from magnification, I focus, in subsequent studies, on healthy foods. I also aim to identify a potential moderator of this effect, specifically, perception of indulgence, and a mediator, comprehension (see Figure 3.1).

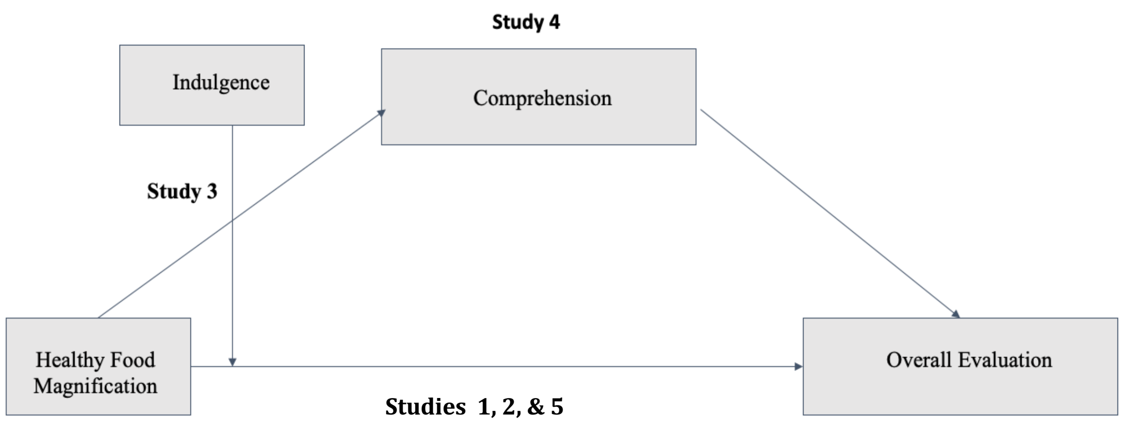

FIGURE 3.1

HYPOTHESIZED RELATIONSHIPS

Overview of Studies

I tested these predictions in five studies. In study 1, I show that magnified healthy food produces greater perceptions of taste, quality, and preference while no difference is seen in the perceptions of unhealthy food. In study 2, I replicate the effect of magnification on perceptions of taste and quality while solely focusing on a different type of healthy food. The aim of the second study is to illustrate the generalizability of the effect in a different context. Study 3 investigates the potential moderating effect of perceptions of indulgence. In study 4, I further probe the relationship, and replicate the effect of magnification on perceptions of taste and quality of healthy food under yet another context while also showing that the effect related to healthy food is mediated by comprehension. In study 5, I identify the main effect of magnification on healthy food perception in a real-world context. I analyze magnifications' impact on Instagram food images by collecting thousands of food images and data related to those images. Analysis run using negative binomial regression revealed that magnified healthy food images significantly impacted both likes and comments of Instagram images.

Study 1: Main Effect of Healthy Magnified Food

Study 1 aims to establish that magnified healthy food images produce greater perceptions of taste and quality and are preferred by consumers. As indicated by our conceptual framework, I expect that consumers will have greater perceptions of taste, quality, and exhibit a preference for healthy magnified foods. Magnified unhealthy food is not expected to be perceived differently across any of the previously mentioned dimensions because consumers already comprehend the nature and benefits of unhealthy food.

Participants and Procedure

A total of 268 student participants (48% female) located in the United States participated in a 2 (healthy vs. unhealthy) x 2 (magnified vs. unmagnified) between-subjects experiment. The study manipulated the size of a food image seen by participants, magnified, or not magnified, as well as the healthiness of the food item itself -- tuna (healthy) or steak (unhealthy) - Figure 3.2.

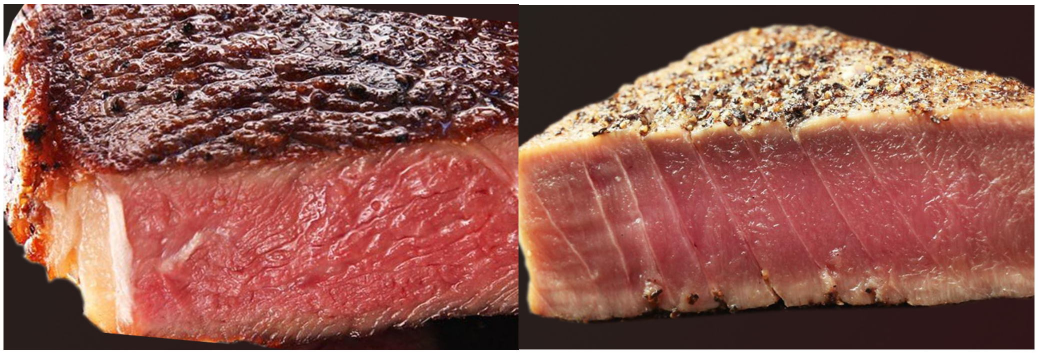

FIGURE 3.2

MAGNIFIED STEAK AND MAGNIFIED TUNA STEAK

STUDY 1

This design resulted in four separate conditions, such that participants saw either a healthy or unhealthy food item that was either magnified or not magnified. After being shown one of the four conditions, participants were asked to indicate their perceptions of taste, quality, and overall preference for the food item. These were measured on a seven-point scale in which higher values indicated greater taste, quality, and preference. These measures were aggregated to form one primary dependent variable, which I term overall evaluation.

Results

Our manipulation of health perception for the food items shown was successful. As expected, tuna steak (M=4.78) was perceived to be significantly healthier than the Angus steak in the unhealthy condition (M=3.43; $F(1, 267) = 64.41$, $p < .001$).

An ANOVA on the overall evaluation (Cronbach's α = .83) showed a significant interaction between the image-size and healthiness factors ($F(1,264) = 6.62$, $p < .05$). Serving size was also measured as a control variable, but was not found to be statistically significant $F(1,264) = .869$, p = [*n.s.*]). We further explore the interaction by examining the simple main effects.

Overall Evaluation

Simple main effects for overall evaluation showed a significant difference between magnified and not magnified healthy food ($M_{\text{magnified healthy}}$ = 4.07 vs. $M_{\text{not magnified healthy}}$ = 3.53, $F(1,264) = 22.06$, $p < .05$). As expected, there was not a significant difference between magnified and not magnified unhealthy food ($M_{\text{magnified unhealthy}}$ = 4.35 vs. $M_{\text{not magnified unhealthy}}$ = 4.79, $F(1,264) = 2.72$, $p = .10$). (See Figure 3.3).

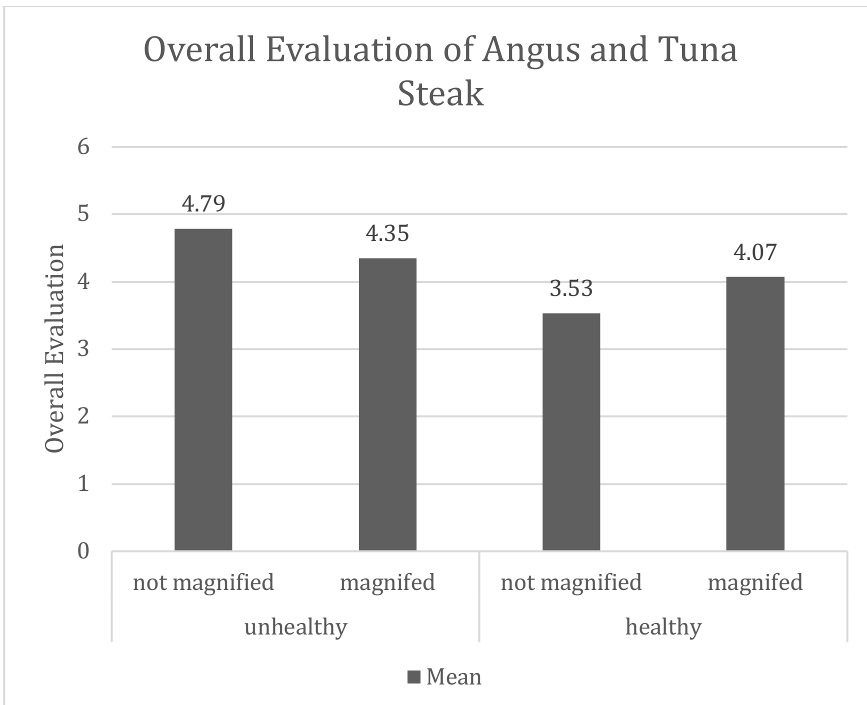

FIGURE 3.3

OVERALL EVALUATION OF ANGUS AND TUNA STEAK

Discussion

The results of this study suggest that consumers perceive magnified healthy food items more positively across measures of taste, quality, and preference when compared to non-magnified healthy food. This study also confirms findings of previous literature, which suggests that unhealthy food is often the default choice and, as a result, preferred to healthy food (Chance, Gorlin, and Dhar 2014). I found that there was no impact on perceptions of serving size. Having established support for my primary hypothesis regarding the impact of magnification on healthy versus unhealthy food, including that perceptions of unhealthy food do not change as a result of magnification, subsequent studies will focus on the effects of magnified healthy food images. To further support the findings of study 1, in study 2, I aim to replicate this effect with a different type of healthy food.

Study 2: Main effect of Magnification on Healthy Food

The primary purpose of study 2 was to replicate the key effect in a different healthy food context, specifically yogurt. The results confirm that consumers perceive magnified healthy food images more positively across the measures of taste, quality, and preference when compared to non-magnified healthy food. I again find that magnification had no impact on serving size perceptions of healthy food.

Method

Study 2 used a 2 (image size: magnified vs. unmagnified) between-subjects design where both conditions were rated as healthy, with a dependent variable that was a composite of taste, quality, and perception of the food item, labeled overall evaluation. Two hundred and twenty-three students (58.9% female, mean age = 20) from a large four-year state school participated in this study.

Procedure

The manipulation of the food item size was similar to that used in the first study. Participants saw a package of yogurt with either a magnified or non-magnified image of the yogurt. (See Figure 3.4.)

This product has been specially formulated in taste and nutritional content and has been determined by an independent Food Research Lab to ***rate as an "A-"***

*Please see additional information about this rating below. **

****The Nutrition Grade for this product is A-***. *(A—best; F—worst).*

The Nutrition Grade was developed with the goal of helping people improve the nutritional quality of their diets. As you may know, not all nutrients are equally good for you. Some of them, like cholesterol, sodium, and saturated fats, should be avoided as much as possible. Some others, however, such as minerals and vitamins, are essential for your health. Thankfully, the USDA devised the Recommended Daily Allowance (RDA) figures for each one of these nutrients, which were used as the foundation of the Nutrition Grade's algorithm. Obviously, foods rich in minerals and vitamins are graded highly. Undesirable nutrients contribute to bad grades.

FIGURE 3.4

YOGURT STIMULI AND HEALTHY DESCRIPTION

As seen in Figure 3.4, on the same page below each food image all participants were also shown a detailed health rating where they were informed that the yogurt is rated as an "A-". Then, they were asked about their perceptions of taste, quality, overall preference, and serving size.

Results

Our manipulation of health perception for the food item was shown to be successful. Participants perceived yogurt to be healthier (M= 4.78, SD = 1.30*)* as compared to the midpoint of the scale, t (222) = 8.92, p < .005).

An ANOVA was run with overall evaluation as the dependent variable. The results show a statistically significant main effect of image size on overall evaluation ($F(1,221) = 10.68$, $p < .01$). Consistent with the results in Study 1, serving size was also measured but was not found to have a significant interaction $F(1,221) = .17$, p = *n.s.*). Post-hoc mean comparisons for the overall evaluation showed a significant difference between the magnified and non-conditions ($M_{\text{magnified healthy}} = 4.02$ vs. $M_{\text{not magnified healthy}} = 3.49$, $F(1,221) = 10.68$, $p < .05$).

Discussion

The results of this study support the findings from Study 1 and suggest that consumers perceive magnified healthy food items more positively across an aggregate measure of taste, quality, and preference when compared to non-magnified healthy food. This study expands the types of healthy foods tested and demonstrates the robustness of the results across varied product categories. This allows us to more confidently expect these results to be generalizable across different healthy foods. This study also removes potential natural confounds that might have been present in the first study, providing a cleaner test of the proposed hypothesis. Subsequent studies will explore the mechanism that mediates this relationship between magnification and greater preference by consumers for healthy food.

Study 3: Moderation by Perceptions of Indulgence

The primary purpose of study 3 was to examine how the consumer perception of food indulgence impacted the effect of the magnified food images. Specifically, we theorize that consumers who view the food item as less indulgent will be more likely to positively evaluate the magnified healthy food image than those who see the item as more indulgent. Those who view a food item as indulgent may be less likely to have an overall positive evaluation of the magnified image of a healthy food because they believe it to be expensive, “fancy”, unusual, or in some other way indulgent. Indulgence was measured by asking participants “How indulgent do you find the following food?”. Study 3 tested this proposed moderator in the context of evaluating a tuna steak. The results of this study reveal that participants who viewed the food as less indulgent were more likely to rely on a magnified image to evaluate taste, quality, and overall perception of a food item.

Method

Study 3 used a 2 (image size: magnified vs. unmagnified) between-subjects design with all participants’ perception of food indulgence measured and a dependent variable that measured taste, quality, and overall perception of the food item. One hundred and eighty Amazon’s Mechanical Turk workers completed the study.

Procedure

The manipulation of the food item size was similar to that used in the first study. In this study, tuna steak was used as the healthy food stimuli. (See Figure 3.5.)

FIGURE 3.5

TUNA STEAK NOT MAGNIFIED AND MAGNIFIED

STIMULI FOR STUDY 3

After viewing the images of the food item, all participants were asked about their perceptions of taste, quality, overall preference, and serving size. In addition to these measures, I also measured participants' perception of food indulgence by asking them how indulgent they viewed the food item they had just seen (tuna steak). This was measured on a seven-point Likert scale where 1 was not indulgent at all and 7 was very indulgent.

Results and Moderation Analysis

An ANOVA was run with the independent variable image size and dependent variable overall evaluation. The analysis revealed a significant main effect of magnification on overall evaluation of healthy food $F(1,178) = 4.88$, $p < .05$), confirming the findings from study 1 and 2.

I then tested whether there was an interaction of magnification and indulgence perception using PROCESS Model 1 and 5,000 bootstrap samples, where overall evaluation was the dependent variable, magnification was the independent variable and indulgence was the moderator. The results revealed that the overall moderation model had a significant effect F (3,176) = 23.76, $p < .001$. The interaction effect was found to be marginally significant (B = -.1237, SE = .0645; CI: -.2511, .0036). We employed the Johnson-Neyman technique to probe the interaction and to identify ranges of the moderator where the interaction effect was statistically significant. A signification moderation region was identified for indulgence ratings from 1 – 4.50 (in z-scores). Simply put, the results show that if participants evaluated the tuna as being less indulgent the effect of magnification on overall evaluation of the food item was moderated. If the participant viewed the tuna as highly indulgent magnification was not found to lead to greater overall evaluations of the food. (See Table 3.1.)

TABLE 3.1

SIGNIFICANT MODERATION REGION OF INDULGENCE STUDY 3

Indul	Effect	se	t	p	LLCI	ULCI
1.0000	.6288	.2528	2.4871	.0138	.1298	1.1278
1.3000	.5917	.2351	2.5164	.0128	.1276	1.0557
1.6000	.5546	.2177	2.5472	.0117	.1249	.9842
1.9000	.5174	.2007	2.5787	.0107	.1214	.9134
2.2000	.4803	.1841	2.6096	.0098	.1171	.8436
2.5000	.4432	.1681	2.6372	.0091	.1115	.7748
2.8000	.4061	.1528	2.6571	.0086	.1045	.7077
3.1000	.3689	.1386	2.6613	.0085	.0953	.6425
3.4000	.3318	.1258	2.6371	.0091	.0835	.5801
3.7000	.2947	.1149	2.5654	.0111	.0680	.5214
4.0000	.2576	.1063	2.4221	.0164	.0477	.4674
4.3000	.2204	.1009	2.1858	.0302	.0214	.4195
4.5002	.1957	.0991	1.9735	.0500	.0000	.3913
4.6000	.1833	.0989	1.8532	.0655	-.0119	.3785
4.9000	.1462	.1007	1.4513	.1485	-.0526	.3450
5.2000	.1091	.1061	1.0278	.3054	-.1004	.3185
5.5000	.0719	.1146	.6280	.5308	-.1541	.2980
5.8000	.0348	.1254	.2776	.7816	-.2128	.2824
6.1000	-.0023	.1382	-.0166	.9867	-.2750	.2704
6.4000	-.0394	.1524	-.2588	.7961	-.3401	.2613
6.7000	-.0765	.1676	-.4568	.6484	-.4072	.2541
7.0000	-.1137	.1835	-.6193	.5365	-.4759	.2486

* values corresponding to the identified regions of significance are highlighted in grey

Discussion

Study 3 demonstrates that the effect of the magnified or unmagnified images is impacted by consumers' perception of food item indulgence. Specifically, if a consumer considers a food item to not be highly indulgent, then they are more likely to consider the healthy magnified image and increase their overall evaluation of the food. Even though consumers may be aware that the food item is healthy, some may still consider the item an indulgent food. For those who do not consider a specific item particularly indulgent, magnifying the image of the food seems to serve as a way for them to appreciate or comprehend the food's taste and quality, and determine their overall preference more quickly. Participants who do not consider an item to be highly indulgent, show a significant increase in their overall evaluation of healthy food when the image is magnified.

The next study aims to identify the driving mechanism behind the main effect by testing the role of comprehension in consumers' evaluation of healthy food images.

Study 4: Mediation through Comprehension

The main question that this study aims to answer is *why* consumers prefer healthy food that has been magnified vs. healthy food that has not. We propose that consumers can better comprehend a magnified food image and can better understand the health benefits that it may be providing, thereby increasing the overall evaluation of the food. In study 4 we aim to replicate the findings of previous studies under a different context (granola) and further explore the process underlying consumer preference for healthy foods when consumers see these foods represented in magnified images. The results of this study show that magnified healthy food (granola) images are better comprehended by consumers, which leads to greater perceptions of taste, quality, and preference.

Participants and Procedure

In this study, we recruited 101 undergraduate participants (50.2% female, average age = 20). In a between-subjects design, participants were randomly assigned to either magnified or unmagnified conditions. In both conditions the participants saw granola images that received a Nutrition Grade of an A-. The same paragraph from Study 2 explaining the Nutrition Grade was also included.

On the next screen, participants were shown either a magnified or unmagnified granola image along with the nutrition grade of the granola (A-). See Figure 3.6. In both conditions, the order of presentation was randomized resulting in a 2 (display: magnified vs. unmagnified) between-subjects design. All participants were exposed to the nutrition grade rating.

FIGURE 3.6

GRANOLA NOT MAGNIFIED VS. GRANOLA MAGNIFED

After viewing the images of the granola, we then measured all participants perceptions of taste, quality, overall preference. These responses were measured on a seven-point scale where 1= "not appealing at all" and 7 = "very appealing". These measures were combined into one measure (Cronbach's α= .79), which served as our key dependent measure, "overall evaluation." A manipulation check assessed perception of how healthy the product was using a seven-point scale where 1 = "not at all healthy" and 7 = "very healthy".

Results and Mediation Analysis

The main effect of greater overall evaluation for magnified healthy food was replicated in this study. An ANOVA was run and revealed a significant main effect of image size on our aggregate dependent variable, overall perception ($M_{Magnified}$ = 3.96, $M_{not\text{-}magnified}$ = 3.38; $F(1,100)$ = 4.92, $p < .05$).

We predicted that comprehension of the food item would mediate the effect of magnification on overall evaluation. We conducted a bootstrapping analysis using PROCESS Model 4 with magnification as the independent variable, overall evaluation as the dependent variable, and comprehension as the mediator. This analysis (5,000 resamples) revealed that comprehension mediated the relationship (b = .4674, SE = .065, 95% CI [.3392, .5956]. Specifically we found that magnification increased participants comprehension (a= .3942, $p < .05$), which subsequently increased participants overall evaluation of the healthy food (b = .4674, $p <$ .001). The direct effect for image size on the dependent variable was no longer significant (b = .1035, SE = .1084, 95% CI [-.1117 .3186], reflecting full mediation. See Figure 3.7.

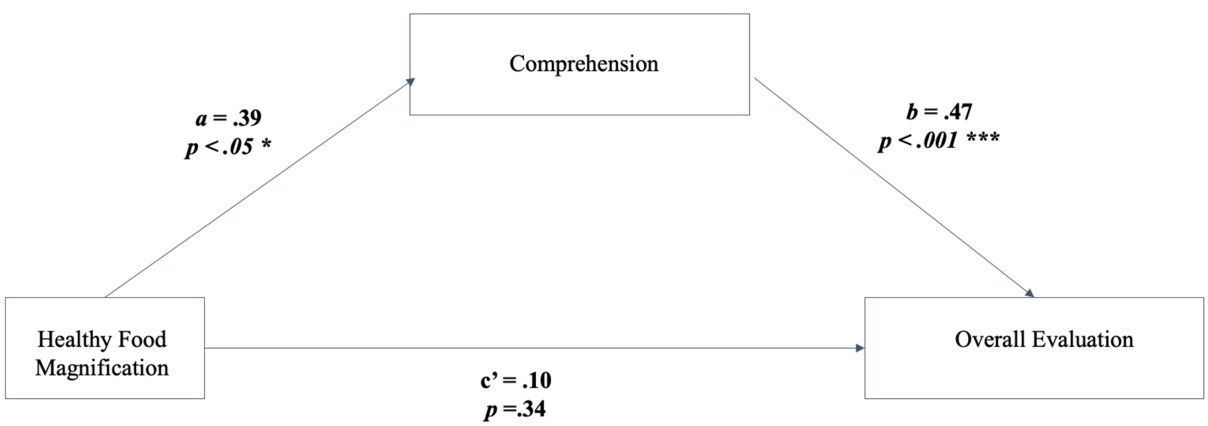

FIGURE 3.7

MEDIATION ANALYSIS FOR STUDY 4

Discussion

These results further confirm findings from the previous studies: that there is no significant difference in perception across the unhealthy conditions and that consumers have a preference for magnified healthy food images compared to not-magnified healthy food images. Furthermore, these results suggest that the reason for this difference in preference across healthy food images is that consumers believe that they can comprehend the food item better when presented with a magnified image.

Study 5: Naturally Occurring Behavior in an Instagram Context

It is common through the use of social media for a brand or food content creator to post images of food. The primary purpose of study 5 was to show real consequences of the presentation of food on Instagram likes and comments. Through data mining and statistical analysis I find support for our results. Specifically, I find that magnified healthy images result in a greater number of likes and comments while magnified images of unhealthy food were not found to have a significant effect on likes or comments.

Data Collection and Method

The data set consisted of Instagram food accounts with 3635 total observations gathered. Accounts were selected by searching for accounts that posted "Food" or "Beverage" on Instagram from March 1st, 2020 until May 2020. Each image served as an observation. From each image the following information was recorded: likes, comments, image type (singular image, multiple images), food type (solid food, beverage), method of preparation (raw, cooked), whether it was a healthy version of an unhealthy food item, health (healthy or not healthy), and magnification (an image that appears larger than how you would normally see the food).

The independent variables of theoretical interest are magnification and healthiness of the food items in the posts. Magnification was binarily coded with 0 = not magnified and 1 = magnified image. Healthy was also a binary variable where 0 = not healthy and 1 = healthy. Three independent third-party coders were used to identify if the Instagram image collected was magnified and if it was healthy.

The dependent variables of interest were likes and comments as those were the most telling behaviors, I could gather from the Instagram posts. Both "likes", and "comments" have been used by previous researchers to examine the power of the intervention (Bowden 2009; Tavares and Nogueira 2021). Since these dependent variables are count variables and the data are over-dispersed for both likes (M = 5727.48, variance = 47871670.8, range: 49-81438) and for comments (M = 136.93, variance = 32016.04, range: 0-3567) we used a negative binomial regression approach, which accommodates count data with over-dispersion.

Results Likes

The results of the negative binomial regression with the dependent variable likes provide evidence of a significant interaction between magnification and healthy food on the number of likes an Instagram post would receive ($B = .2124$, $SE = .0722$, $p < .005$). See Table 3.2 below.

TABLE 3.2

NEGATIVE BINOMIAL MODEL RESULTS FROM INSTAGRAM FOOD ACCOUNTS LIKES (STUDY 5)

Likes Outcome Model

	B	*SE*	*p*
Image Type			
Singular Image	-.2878	.0444	< .001***
Multiple Images	.0761	.0541	.16
Food Type			
Food	.0262	.2231	.91
Beverages	−.1930	.2354	.41
Method of Preparation			
Raw	-.0250	.2422	.92
Cooked	.3769	.1856	<.05 *
Healthy Version of Unhealthy Food	-.6721	.12	<.001***
Magnified	-.0791	.0535	.14
Healthy	-.1094	.0607	.07
Healthy x Magnified	.2124	.0722	< .01 **
Intercept	9.1012	.3019	< .001 ***

Number of observations = 3645

2 x Log-likelihood = -70191.69

The variables included in the model that had a statistically significant negative impact on the number of likes a post received included: individual image type (relative to multiple images or video) ($p < .001$) and healthy version of an unhealthy food item ($p < .001$). The variable "method of preparation" showed for cooked item there was a statistically significant positive impact on the number of likes a post received ($p < .05$).

Results Comments

A negative binomial regression conducted with comments as the dependent variable provided evidence of a significant interaction between magnification and healthy food images on the number of comments an image receives ($B = .1598$, $SE = .0666$, $p < .05$).

The variables included in the model that had a statistically significant negative impact on the number of comments a post received included: individual image type (relative to multiple images or video) ($p < .001$), healthy food (relative to unhealthy food) ($p < .001$), and unhealthy version of an unhealthy food item ($p < .001$). The variable magnified showed for magnified images there was a statistically significant positive impact on the number of comments a post received ($p < .05$).

TABLE 3.3

NEGATIVE BINOMIAL MODEL RESULTS FROM INSTAGRAM FOOD ACCOUNTS COMMENTS (STUDY 5)

Comments Outcome Model

	B	*SE*	*p*
Image Type			
Singular Image	-.4443	.0409	< .001***
Multiple Images	-.0572	.0497	.25
Food Type			
Food	-.0173	.2055	.93
Beverages	−.0765	.2169	.72
Method of Preparation			
Raw	-.1246	.2235	.58
Cooked	.3105	.1714	.07
Healthy Version of Unhealthy Food	-.7811	.1058	<.001***
Magnified	.0991	.0492	< .05*
Healthy	-.2953	.0559	< .001***
Healthy x Magnified	.1598	.0666	< .05 *
Intercept	5.6556	.2782	< .001 ***

Number of observations = 3645

2 x Log-likelihood = -42770.04

Discussion

These results confirm expectations of our theory with both our dependent variables of interest: likes and comments significantly increasing when the food image was healthy and magnified. This study provides evidence that consumers actions in an online context follow their preferences and overall evaluations of products in an experimental setting (as shown in Studies 1-4). While other variables collected were shown to either negatively (image type, healthy version of unhealthy food) or positively (cooked) either of the dependent variables we show a statistically significant interaction between healthy food and magnifications impact on both comments and likes. These findings suggest that companies selling or promoting healthy food products via social media could easily benefit from changing a singular design dimension, magnification, in order to increase consumer engagement.

General Discussion

In this research, I examine how magnification of food images can impact consumers' choice of healthier foods. Specifically, I posit that manipulating the magnification of healthy food images will increase perceptions of taste, quality, and preference by raising the subjective comprehension of healthy food. Through the course of five studies, including visual mining from Instagram, I found evidence of the hypothesis and identify both a moderator (indulgence) and a mediator (comprehension).

Study 1, (using tuna (healthy) and beef steak (unhealthy)) provided evidence to support the main effect of the research: magnified healthy images produce greater perceptions of taste and quality for healthy foods. I find that among unhealthy foods there is no significant impact of magnification and propose that the reason for this is related to the ease with which people understand the utility and benefit they receive from unhealthy food (cite). I theorized that magnification benefits healthy food because it leads to a greater subjective understanding of the item, making it easier and more desirable to interact with, but, because unhealthy food is already so well understood by the consumer, it does not benefit from the same treatment.

Study 2 confirms the main effect with healthy food in a different context. For this study, yogurt was used as the stimuli in order to establish the generalizable nature of the results and to account for any potential confounds present in the first study.

In Study 3, the primary goal was to test if perceptions of indulgence had a moderating effect. I find that individuals with lower perception of indulgence toward the food item were more likely to rely on magnified image size in their evaluation; while individuals with higher perception of indulgence towards the food item are less likely to rely on magnified images evaluate taste, quality and preference. This result could provide some insight into the findings of Sullivan, Fitzsimons, Platt, and Huettel (2019) and further highlight the usefulness of magnification since participants who do not consider an item to be highly indulgent, for whatever reason(s), show a significant increase in their overall evaluation of healthy food when the image is magnified.

Study 4 serves as a replication of the main effect and explores the mechanism through which it occurs – comprehension. I show that magnified images allowed the consumers to comprehend the healthy food item better thereby leading to greater overall evaluation of the food product itself. This study also used yet another different healthy food, granola, illustrating again that the effect can be generalized to different types of healthy foods.

Study 5, uses negative binomial regression analysis to show actual behavior on a social media platform (Instagram) by collecting data on thousands of food images. The analysis provides evidence of the positive effect on the dependent variable of likes and comments when healthy food images are magnified. Taken together, these five studies provide evidence of magnified food images' effect on consumers' overall evaluation of the food item.

Theoretical Contributions

The findings of this research contribute to prior literature focused on healthy vs unhealthy food choices. Previous work has found that many different factors can influence a consumers food choice, including others body type (Dhar and Wertenbroch 2000), self- control (Baumeister 2002; Kivetz and Simonson 2002), and "affective/cognitive" (Romero and Biswas 2016) states (Shiv and Fedorikhin 1999). I examine another factor, that to the best of my knowledge, has not been considered before, magnification and its effect on healthy and unhealthy food preference. The present research begins to untangle this relationship between the two by showing a mediating mechanism, comprehension. Whereas healthy food choices are indeed more difficult for consumers to make, magnified images of food can increase subjective comprehension and increase healthy food preferences.

This work also contributes to the theoretical knowledge related to marketing and indulgence. Past work by Sullivan, Fitzsimons, Platt, and Huettel (2019) found that introducing an irrelevant indulgent food into a choice can encourage more disciplined choices by consumers. The current work builds on the findings of indulgent food choice by finding that consumers who evaluate a food as less indulgent respond more affirmatively to the much more subtle stimuli of magnified images studied here that are intended to convey positive information about healthy foods.

Our findings also contribute to research in the visual design domain of marketing. Visual cues have been found to play a dominant role in influencing consumers food choices and evaluations (Biswas, Labrecque, Lehmann, and Markos 2014; Chandon and Ordabayeva 2009;

Hoegg and Alba 2007) largely because visual cues are interacted with before other senses (Herz and Engen 1996). This current work expands and highlights the importance of visuals cues by showing how a larger image size (magnification) can have a positive impact healthy food evaluations and preferences.

Practical Contributions

Based on the results of our research, I can offer several practical considerations for consumers and marketing managers. For consumers who are trying to eat healthy foods or encourage others to do the same, our findings indicate that showing larger images of healthy food, perhaps through social media, on packages, and on menus will improve their own and others' perceptions of the taste and quality of the food.

Our findings also have clear implications for public policy and its subsequent impact on consumer health. Simply magnifying healthy food images in promotional material, menus etc. can lead to consumers preferring healthier food. Making healthy food options an easier choice is the first step in creating healthier habits.

Marketers often use images of the food products they sell in promotional material. This research could benefit marketing managers, of food companies, restaurants, food retailers, and others by suggesting how to best present their healthy food products. This relatively straightforward visual change could lead to improvements in menu designs (study 1) packaging (studies 2 and 4), and advertisements (studies 3 and 5) that would aid consumers in making healthy food selections, thereby driving sales of healthy options. Marketers offering healthy food options may be able to assist consumers in making better decisions by presenting large/larger images of their healthy foods.

Limitations and Future Research Avenues

In this work I only considered food items that were seen as either healthy or unhealthy, future work might consider "neutral" food items (Romero and Biswas 2016) to see if magnification benefits these types of products. In addition, I focus primarily on food items, not beverages. It could be beneficial to establish that this effect is generalizable to both solid food and beverages alike. Future work could also consider the visual medium used to show the food item. Perhaps video magnification acts differently than a static image and may not interact in the same way.

Another issue to consider is the optimal amount of magnification. Perhaps there is a boundary condition where a certain level of magnification of an image is no longer preferential to consumers and may simply overwhelm them. Future work should consider this potential limitation.

There are also several moderators that could influence the pattern of effects found in this research. For example, activation of health goals, type of eater – restrained or unrestrained (Scott et al 2008), and package variety. Other potential mediators could be examined in order to further the understanding of the underlying process such as self-control, curiosity, and how attractiveness of the food item.

Even with Study 5's use of Instagram image mining, which confirmed the positive relationship between magnification and healthy food images, future work should consider other real behaviors, perhaps more solely focused on purchases. For example, it would be interesting to test the findings of this research in a restaurant setting.

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CHAPTER 4

ESSAY 3

SAVED BY DISTRACTION? (UN)CONSCIOUS PROCESSING OF SCAMS[3]

[3] Waschka, Lana and Marcus Cunha Jr. To be submitted to *Journal of Consumer Research*.

Abstract

Building on the findings of prior Unconscious Thought Theory (UTT) research, which showed how utilizing unconscious processing allowed participants to better identify lies (Reinhard, Greifeneder, and Scharmach 2011), the current work proposes a potential solution for consumers to overcome and identify complex scams and frauds: the use of distraction/ unconscious thought while processing information about scams. Through the course of three studies, I find evidence in support of the hypothesis and identify a moderated (relationship status) mediation (materialism) and that the main relationship is moderated by low self-esteem.

This work contributes to the literature by extending the application of unconscious thinking to situations of complex and costly scams and frauds. It contributes to theory by examining the relationship between materialism, low self-esteem, fraud victimization, and distraction/unconscious thought.

Fred, a mechanical engineer and avid stock day-trader, aged 62, recently received a highly detailed and elaborate email offer to join a group of international investors who are organizing a foreign direct investment (FDI) in a French company. The offer says that this company makes an unregulated chemical that will be used in future vaccine development. The offer estimates that a $10,000 investment will buy Fred about a one-percent ownership in the company via the group of investors. Citing the massive vaccine projects associated with the Covid-19 virus, the email estimates the potential return on investment as being well over one million dollars as they expect the company to be worth more than 100 million dollars in the next two years. Should Fred invest in the offer?

Scams and frauds collectively cost Americans (alone) billions of dollars annually (Deevy and Beals 2013; Pouryousefi and Frooman 2019). These scams and frauds take on a myriad of forms to deceive the consumer, from those with elaborate backstories, often involving unregulated business ventures and lofty, unrealistic promises of payouts, that might be believable to a somewhat knowledgeable person like Fred, to the seemingly innocuous but still complex offers that steal information now in order to steal money and identities later from people.

Even with the historical prevalence of white-collar crime, most of the early literature in this area has focused on the perpetrators and tactics (Benson 1985; Stotland 1977), with only later work considering the victims. More recently, the literature has begun to focus on identifying key characteristics of victims of this type of crime. The classification of Ponzi scheme victims by Ganzini, McFarland, and Bloom (1990) revealed that these victims tended to be older, wealthier, and have few mental health-related issues. These findings were verified by more recent research, which identified married middle-aged or older men as the primary victim of financial scams. Perhaps surprisingly, these people also tended to have higher income, education, and financial literacy compared to the general US population (Pak and Shadel 2011; Consumer Fraud Research Group 2006; FINRA Foundation 2007).

Rather than simply identifying the demographic data associated with fraud victims, Deliema, Shadel, and Pak (2020) undertook a study to identify the "psychological mindsets and behaviors associated with being a victim of investment fraud" (p. 905). They found that known victims were significantly more materialistic than general investors and were also more likely to believe that unregulated investments yield higher returns. Whereas their research identifies the kinds of psychological mindsets that are associated with this type of victimization by scams and fraudulent activities, methods of overcoming this victimization have not been closely examined.

Building on the findings of prior Unconscious Thought Theory (UTT) research, which shows how utilizing unconscious processing allows participants to better identify lies (Reinhard, Greifeneder, and Scharmach 2011), the current work proposes a potential solution for consumers to overcome and identify complex scams and frauds: the use of distraction/ unconscious thought while processing information about scams. This work contributes to the literature by extending the application of unconscious thinking to situations of complex and costly scams and frauds. It contributes to theory by examining the relationship between materialism, low self-esteem, fraud victimization, and unconscious thought.

Conceptual Background

This research brings together three areas of research: consumer fraud, materialism, and Unconscious Thought Theory (UTT).

Demographic data in a study of investment fraud (DeLiema, Shadel and Pak 2020) indicates that victims are more likely to be older, married, males with a college degree or even a post-graduate degree. Whereas DeLiema, Shadel and Pak (2020) also show that fraud is underreported with large numbers of victims unwilling to admit being swindled, it is clear that fraud victims are not limited to young (inexperienced/naïve), single, less-educated people, but these crimes can cut across many demographic groups. Consumers are subjected to a torrent of fraudulent offers via email and traditional mail services, social media, and other sources (FBI 2022; United States Postal Inspection Service 2022; Holtfreter, Reisig, and Pratt 2008). How do consumers evaluate these offers? What motivates these consumers? Is there a way that consumers could think about these offers that would reduce the number of victims?

Past research has linked materialism with failures of self-control. For example, Gardarsdottir and Dittmar (2012) and Rose (2007) found that materialistic people are more likely to engage in compulsive spending, while other research (Fitzmaurice 2008) linked materialism, defined as "the belief that having money and possessions is the most important thing in life" (Cambridge Dictionary 2022), with splurge purchasing. Low self-control, in turn, has been found to increase the probability that an individual will become a victim of fraud (Holtfreter, Reisig, and Pratt 2008). In addition, older people (age 60 and above) with higher impulsivity/low self-control levels were found more likely to succumb to consumer products and services fraud (Reisig and Holtfreter 2013).

These scams can be very complex because they sometimes incorporate current trends in technology, the stock market, cryptocurrency, and calculations such as return-on-investment (ROI). Consequently, many people would look at such offers and argue that people should carefully process and reason through the offer to determine if it is a scam, a bad investment, or a good investment. However, recent research in psychology indicates that, particularly in complex situations, those who allow their brains to work on a decision unconsciously might make superior decisions (Dijksterhuis 2004; Lerouge 2009; Dijksterhuis and Nordgren 2016). These results suggest that consumer decision-making would benefit from a period of distraction (i.e., unconscious processing), as opposed to conscious deliberation (Wilson and Schooler 1991) in complex decision situations. Processing by the unconscious cognitive system is predicted to be a more powerful information-processing system than the conscious, short-memory based, system.

To summarize, I believe that consumer victims of fraud and scams are often motivated by materialism and evaluate these offers under low self-control, which mediates the relationship between materialism and victimization. Furthermore, the range of educational attainment of these victims suggests that at least some attempted to consciously and rationally weigh the risks and benefits of these offers. I propose a period of unconscious thought (distraction) when evaluating complex scam offers as a potential method of reducing fraud victimization. This work focuses on complex financial scams.

In addition, we will investigate two possible moderators of these behaviors. First, the demographic research in this area indicates that married people are more likely to fall for these fraudulent offers than single people (DeLiema, Shadel and Pak 2020). Although there is no tested explanation at hand for why this would be the case, following the literature, we will investigate and expect that relationship status (Pak and Shadel 2011; DeLiema, Shadel and Pak 2020) could function as a moderator of the materialism mediator (Kim 2013). Second, recent research (Forgas 2019) has suggested that people with low self-esteem are more likely to be in a bad mood and negative mood tends to decrease gullibility. Therefore, we will investigate self-esteem as a potential moderator as well.

Fraud Victimization

Two foundational theories that explain potential criminal acts and their most likely victims are the "routine activity theory" (Cohen and Felson 1979), and "lifestyle exposure theory" (Hindelang, Gottfredson, and Garofalo 1978). Routine activity theory argues that the convergence of multiple things: likely offenders, suitable targets, and the lack of capable guardians create a situation in which a crime is more likely. Lifestyle exposure theory argues that certain lifestyles (for example, working alone, at night, in the presence of strangers, etc.) expose people to risk. This exposure to risk results in the increased likelihood of victimization.

Elements of these theories are found in the "opportunity model of predatory victimization" (Cohen, Kluegel, and Land 1981) including the arguments that, by themselves, socio-demographic characteristics do not explain or predict victimization and that the likelihood of victimization depends on the attractiveness of a target to criminals, the proximity and exposure of a potential victim to criminals, and the presence or absence of guardians or other supervision to stop the crime. Focusing only on demographic characteristics of fraud victims and not investigating the why or how of victimization has been a consistent limitation in consumer fraud research (Holtfreter, Reisig, and Pratt 2008).

This essay considers consumer fraud, which, according to Holtfreter, Reisig, and Pratt (2008), is characterized by and involves some level of cooperation between the fraudster and the victim. Previous studies have looked at victimization through the frameworks of "routine activity theory", "lifestyle exposure theory", and the "opportunity model of predatory victimization". For example, it is commonly assumed that older adults are considered attractive targets because they are believed to have accumulated more wealth (DeLiema, Shadel and Pak 2020) and income has been used as a proxy measure for target attractiveness (Franklin, Franklin, Nobles, and Kercher

2012; Leukfeldt and Yar 2016). Specific activities that have been shown to increase the chances of being targeted for fraud include buying from unknown sellers after unsolicited emails, letters, TV ads, and phone calls (Holtfreter, Reisig, and Pratt 2008) and online shopping (Pratt, Holtfreter, and Reisig 2010).

Materialism and Self-Control

One psychological or behavioral trait that has been shown to lead to fraud victimization is materialism. Materialism can be defined as “the belief that having money and possessions is the most important thing in life” (Cambridge Dictionary 2022). While not the same thing as “greed” (an *insatiable* desire), materialism can still have negative associations because it is often linked to low self-control (Gardarsdottir and Dittmar 2012; Rose; 2007; Fitzmaurice 2008). Until recently, materialism was treated as a stable life value that could not be manipulated. However, Kim (2013) has shown that materialism can be induced and it manifests as “a burst of materialistic thoughts” (p759). This research also indicated that low-level construal activation served as the mediator between materialistic thoughts and low self-control (Kim 2013). Furthermore, the mere contemplation of an offer/advertisement (fraudulent or otherwise) that includes the promise or possibility that a person could receive a large amount of money (such as by winning the lottery) can stimulate these materialistic thoughts and those material thoughts then lead to lower self-control (Kim 2013; DeLiema, Yon, and Wilber 2016).

Low self-control, in turn, is associated with counterproductive behavior such as the frequent buying and selling of stocks (DeLiema, Shadel and Pak 2020), which reduces overall investment returns (Malkiel 2015) and served as a mediator between gender and investment fraud (DeLiema, Shadel and Pak 2020). Importantly for the current research, low self-control has also been found to increase the probability that an individual will become a victim of fraud in general

(Holtfreter, Reisig, and Pratt 2008; Reisig and Holtfreter 2013). It is thought that those people with low self-control are more susceptible to the promises of wealth and rewards that fraudsters and scammers often employ (Consumer Fraud Research Group 2006; Deliema, Yon, and Wilber 2016).

Past literature has been careful to differentiate between the targeting of victims and behaviors of victims *after* they have been targeted. This is particularly relevant for consumer fraud, because the majority of interactions take place "remotely" (i.e., online, via phone calls, or through physical mail, not in a face-to-face context) and fraudsters are not as able to take a targeted approach to identifying potential victims (Holtfreter et al. 2008). Thus, how a consumer reacts to these broad appeals is more indicative of whether they will become victims to a potential fraud.

Negative Emotion and Self-Esteem

Recent research has suggested that emotions can have a moderating effect on gullibility in which a "…negative mood can reduce gullibility and positive mood can increase gullibility…" (Forgas 2019, p.306). Considering low self-esteem (LSE) more closely, The Center for Clinical Interventions (Western Australia) defines LSE as "…having a generally negative overall opinion of oneself…", and that, "A person with low self-esteem might often feel sad, depressed, anxious, guilty, ashamed, frustrated, and angry" (CCI 2022 p.1). Since people with high or low self-esteem could have strong positive or negative moods, which impact gullibility, I plan to test for self-esteem as a moderator in the current work. It is possible that people with LSE will exhibit a negative mood and, therefore, less gullibility, meaning they would be less likely to fall for fraud and scam schemes perhaps because they do not believe they are "lucky" or "worthy" of whatever rewards or windfalls the scammers promise.

Unconscious Thought Theory's Role in Fraud Victimization

Unconscious thought is the more cognitive and/or affective processing that occurs outside of consciousness (Dijksterhuis and Nordgren 2016). It has been argued that unconscious processing of information leads to superior choices through unconscious deliberation (Dijksterhuis 2004; Dijksterhuis and Nordgren 2016). Unconscious Thought Theory (UTT) holds that unconscious processing leads to better decisions than conscious thought because the unconscious better organizes information and weights the attributes more accurately by increasing the probability that the brain's attention is more broadly distributed across the features of the problem (Bargh 2011). Both Abadie, Waroquier, and Terrier (2013) and (Bos, Dijksterhuis, and van Baaren 2011) reported that unconscious thinking increases the memory for attributes that are more relevant, effective and important at the time of decision than for attributes that are unimportant. Furthermore, representations of the characteristics of a decision tend to be polarized under unconscious thought. Dijksterhuis (2004, Experiment 4) found that the positive characteristics of a desirable roommate were much more accessible than the negative characteristics of a desirable roommate when information is processed under unconscious thought and, similarly, that the negative characteristics of an undesirable roommate were much more accessible than the positive characteristics of an undesirable roommate when information is processed under unconscious thought.

Therefore, instead of using typical conscious deliberation (Wilson and Schooler 1991), more recent research supports the idea that individuals facing decisions of higher complexity might benefit from a period of distraction (i.e., unconscious processing). To achieve this, the brain is allowed time to use unconscious processing by providing it with a distraction mechanism. The brain must use working memory and conscious processing to deal with the distraction – an unrelated task – thereby allowing unconscious processing to occur in the background.

UTT suggests that while the brain's working memory is dealing with the distraction tasks, unconscious processing continues to work on the previously presented complex information/problems (Dijksterhuis et al. 2006; Dijksterhuis and Nordgren 2016). Past literature has also examined the benefits of using unconscious thought to detect deception (Reinhard, Greifeneder, and Scharmach 2011). Their work focuses on why people are generally such poor detectors of deception and why unconscious thought overcomes those shortcomings. This literature has identified the four potential explanations for this lack of accuracy: few diagnostic cues to help identify the lie, a lack of conscious processing capacity, the use of wrong cues, and top-down processing. Reinhard, Greifeneder, and Scharmach (2011) citing Albrechtsen, Meissner, and Susa (2009), argue that these explanations are also all attributes ascribed to conscious thinking, not unconscious thinking. Unconscious thought is believed to allow for greater identification of deception because of its greater processing ability, lack of influence by consciously held beliefs that may be flawed, and the manner in which information is processed --bottom-up as opposed to top-down (Reinhard, Greifeneder, and Scharmach 2011).

Unconscious thought processes work in a more bottom-up manner when forming an impression, while conscious thought works in a top-down manner (Bos and Dijksterhuis, 2011). Because a person's unconscious processing system has a larger capacity (when compared to the conscious), it can handle the data in an unbiased manner. People who are processing information in this way, "integrate large amounts of concrete information… slowly working toward abstract, higher-order output" (Bos and Dijksterhuis 2011, p.729). Under conscious processing, the brain relies on schemas because of its lower capacity, which often leads to making decisions that support the initial schema.

According to UTT, conscious processing is effective in dealing with problems that have a small number of attributes and has been found to be more effective when considering simple alternatives that only vary in a small number (two or three) of attributes. Meanwhile, unconscious processing can consider and more effectively deal with complex alternatives that feature multiple attributes. Since frauds and scams often involve complex investing proposals (Fraud Advisory Panel 2011), as with the opening example, we hypothesize that employing unconscious thought will allow consumers exposed to frauds or scams to more easily identify these fraudulent offers and to subsequently avoid them.

Overview of Studies

These predictions were tested through three studies. In study 1, we show that unconscious thought lead to a reduced likelihood of engaging with an offered scam as well as higher likelihood to avoid the scam offer. In study 2, we replicate the effect of unconscious thought on the likelihood to engage with a different scam offer, as well as the likelihood to identify a scam under a different context, while also examining process by showing moderated mediation through relationship status and materialism. In study 3, we aim to replicate the effect of unconscious thought while also testing a potential moderator, self-esteem.

Study 1: Main Effect of Unconscious Thought

The objective of study 1 was to establish that allowing consumers to engage in unconscious thought after being exposed to a complex scam results in a significantly greater likelihood to avoid the fraudulent offer and identify the offer as a scam. As indicated by our conceptual framework, we expect that consumers will have a greater likelihood to identify and avoid the scam because the unconscious will more fully process the complex scenario.

Participants and Procedure

A total of 192 students from a large state school (34.4% female) located in the United States participated in a 2 (unconscious vs. conscious) between-subjects experiment. All participants were exposed to the same four scams which were framed as an investment opportunity, ostensibly using new blockchain technology. Of the four scams, two were fillers to add to the complexity of the scams. The remaining offers were the most scam-like offer (focal scams) and the legitimate (least scam-like) offer. The focal scam offer included more of the common scam attributes as identified by law enforcement (secureflorida.org 2022). The legitimate scam offer did not include any of these attributes. The two filler offers both contained half scam attributes and half legitimate attributes. The study manipulated the type of processing that participants were asked to engage in. In the conscious condition participants were asked to elaborate on the investment opportunities they had just seen, whereas in the unconscious condition they participated instead in a distraction task. Participants were asked to solve a word search as their distraction task (Figure 4.1). Participants were asked to find five words and were given an example word to illustrate how to solve the word search. Participants were asked to indicate their interest in the remaining two offers after informing them that the two filler offers were no longer available. The scam investment opportunity was pretested to confirm that participants viewed it as a complex financial opportunity.

After being shown all four of the investment scenarios and either elaborating on these offers or engaging in a distraction task, the participants were told two of the offers were no longer available (Figure 4.2) and asked to indicate their interest in learning more about the opportunity and their likelihood to invest. We specifically asked them "How interested are you in Offer B?" and "How likely are you to invest in Offer B?". These measures served as our dependent measures.

The word-search puzzle task is composed of a 10x10 array of letters. Each letter in the puzzle is numbered so you can enter the range of numbers that contain the words you found. For example, if the range of number containing the letters of the word "carrot" is "84-89", you would type this range next to the word "carrot".

The words come from three categories: Countries (5), Animals (5), and Transportation (5). The words can follow any orientation (horizontal, vertical, or diagonal).

Your "attention check" will be based on whether you finished solving the word-search puzzle correctly. You will need to find at least 5 words to continue. If you decide to quit, click on proceed when the button becomes available.

C_{01}	T_{02}	H_{03}	O_{04}	R_{05}	S_{06}	E_{07}	D_{08}	O_{09}	G_{10}
A_{11}	O_{12}	T_{13}	J_{14}	B_{15}	I_{16}	K_{17}	E_{18}	O_{19}	C_{20}
R_{21}	R_{22}	R_{23}	R_{24}	O_{25}	J_{26}	A_{27}	P_{28}	A_{29}	N_{30}
H_{31}	R_{32}	A_{33}	G_{34}	E_{35}	R_{36}	M_{37}	A_{38}	N_{39}	Y_{40}
O_{41}	A_{42}	I_{43}	A_{44}	A_{45}	M_{46}	P_{47}	A_{48}	F_{49}	C_{50}
R_{51}	P_{52}	N_{53}	B_{54}	G_{55}	U_{56}	I_{57}	T_{58}	R_{59}	A_{60}
R_{61}	A_{62}	G_{63}	O_{64}	L_{65}	C_{66}	P_{67}	R_{68}	A_{69}	N_{70}
O_{71}	P_{72}	N_{73}	A_{74}	E_{75}	R_{76}	B_{77}	U_{78}	N_{79}	A_{80}
C_{81}	T_{82}	I_{83}	T_{84}	A_{85}	L_{86}	Y_{87}	C_{88}	C_{89}	D_{90}
C_{91}	A_{92}	T_{93}	O_{94}	S_{95}	A_{96}	N_{97}	K_{98}	A_{99}	A_{00}

FIGURE 4.1

WORD SEARCH DISTRACTION TASK

Offer **B**

Company X is a diversified financial services innovator on a mission to utilize digital assets and blockchain technology. The investing environment changes quickly, so you have a one-time, limited-time chance to put your money to work -- available until 5pm today! This exciting investment opportunity is based on the latest in blockchain technology and offers a very high rate of return. In order to save money for our investors, the company does not maintain physical offices, so this offer is available online only. You will enter multiple pieces of personal information to signup for this offer, but do not worry – you are already preapproved for this unique investment opportunity.

Offer **D**

Company Z is a diversified financial services innovator on a mission to utilize digital assets and blockchain technology. The investing environment changes quickly, but you have many chances to put your money to work – the offer is available anytime! This reasonable investment opportunity is based on the latest in blockchain technology and offers a low, but consistent, rate of return. We are a global company and maintain physical offices around the world. To get started, you will need to enter just a few pieces of personal information that will be used to determine if you can be approved for this unique investment opportunity.

FIGURE 4.2

SCAM OFFER B; LEGITIMATE OFFER D

Results

An analysis of the difference in consumer response to scam offers when employing different processing strategies (conscious vs. unconscious) found that there was a marginally significant main effect on providing interest and likelihood to invest.

Interest

An independent samples t-test revealed a marginally significant difference between conscious vs. unconscious processing with interest in the scam offer being marginally significantly higher for conscious processing ($M_{\text{conscious}} = 4.17$, $SD = 1.82$) than for unconscious ($M_{\text{unconscious}} = 3.70$, $SD = 1.72$), $t(1, 190) = 1.84$, $p = 0.07$.

Likelihood to Invest

A one-way ANOVA revealed a marginally significant difference between conscious vs. unconscious processing with the likelihood to invest being marginally significantly higher for conscious ($M_{\text{conscious}} = 3.94$, $SD = .17$) rather than for unconscious ($M_{\text{unconscious}} = 3.53$, $SD = .17$), $t(1, 190) = 1.70$, $p = .09$.

Discussion

This study shows that by allowing consumers to participate in unconscious thought after being exposed to multiple investment scams results in a marginally significantly greater likelihood to identify and avoid that scam. Specifically, when asked about their interest in the most fraudulent offer (as determined by a pretest) we find that those who were able to engage in unconscious processing (a word search) were less likely to be interested in the scam offer. The same direction holds for the participants interest in investing, with those who engaged in unconscious thought being less likely to want to invest in the more fraudulent offer.

While this study provides only marginal results, the population used (college students aged 18-21) have not been identified by previous literature as those most likely to fall victim to this type of investment scam. In fact, the population prior literature has found most at risk are educated men older than 60 (Ganzini, McFarland, and Bloom 1990; DeLiema, Shadel and Pak 2020). In the next study we address this need to establish a wider population pool. Overall, this study suggests that unconscious processing may be more helpful to consumers when deciding between investment opportunities that include frauds and because of this we proceeded to Study 2 with the aim of establishing a stronger effect.

Study 2: Replication of Study 1 and Moderated-Mediation

The primary purposes of study 2 were to replicate the findings of study 1 under a different context and further explore the process that explains consumers' interest in a scam and their ability to identify the deception. We find that when asked about making an investment decision, those participants who engaged in unconscious processing were significantly less likely to engage and show interest in the scam offer. We find that this effect is mediated by the trait characteristic materialism and moderated by the relationship status of the participant. Specifically, participants successfully avoided the scam and had a significantly lower interest in learning more about the offer or investing after engaging in unconscious processing.

Participants and Procedure

The design and procedure for the second study were similar to those of the first study with a 2 (unconscious vs. conscious) between-subject design. However, in this study, we only showed one scam investment opportunity but included more details about the investment in order to increase complexity. In order to examine the process, we also investigated materialism and relationship status measures to determine if a person's materialism level mediates the relationship and if relationship status moderates by using PROCESS Model 7. According to past literature, both materialism and trait attributes like relationship status (DeLiema, Shadel and Pak 2020) have had meaningful impacts on a person's likelihood to fall victim to a scam. This study's goal was to further examine that potential relationship.

Three hundred participants were initially recruited from an online panel, however, 43 failed the manipulation check, which left a final sample of 257. We eliminated participants who either did not engage in the unconscious condition task (a word search) or did not engage in the conscious task (describing advantages and disadvantages). Each participant was shown the fraudulent investment opportunity and asked to read it carefully. This offer involved an opportunity to directly invest in a foreign company involved in electric vehicles (Figure 4.3). After seeing the investment opportunity, participants were exposed to either conscious or unconscious processing tasks. As previously described the conscious condition required participants to write about possible advantages or disadvantages associated with the offer. In the unconscious condition they were asked to solve the same word search used in Study 1. Participants were asked to find five words and were given an example word to illustrate how to solve the word search.

Dear Fellow Investor,

We are a group of international investors who are organizing a foreign direct investment (FDI) in a French company. The company makes a chemical that will be used in future electric car battery development.

If you missed out on buying stock in Tesla or Rivian, this is a chance to invest in a company that will be crucial to electric vehicle development.

The chemical is unregulated and produced by a small privately held company. It is not a public company – no one can buy stock in the company – we are seeking to make a direct investment that will give our group majority control of the company because there is less regulation associated with direct investment. We plan to move the company's manufacturing plant to a country with cheaper labor in the Caribbean, where the group has already set up an office.

Our group is made up of people like you -- knowledgeable, but not particularly wealthy. We want to very quietly and quickly raise about $510,000 (to own 51 percent of the company currently valued at about a million dollars) before some venture capitalist sees the great opportunity and swoops in to buy the whole company. Therefore, we ask if you would be willing to invest with the group.

A $10,000 investment will buy about a one-percent ownership in the company via the group. We estimate the potential return on investment as being well over one million dollars as we expect the company to be worth more than 100 million dollars in the next two years.

Obviously, a venture capitalist could buy the entire company at any time or the value of the company could greatly increase, which would mean the percentage of the company you would own for the same amount of money would be less. You are not limited to a $10,000 investment and you can invest a greater or smaller amount --- even a $1000 investment will net you $100,000 by our estimates.

However, you must decide today. Given the possibility of a venture capitalist buying the whole company any day, you can understand that time is of the essence! We expect to raise the money today. When we have 51 investors or raise $510,000 this opportunity will be closed, so do not hesitate. With interest rates historically low and inflation at 50-year highs, we are all losing money if we do not make investments now.

Thank you for considering this option. To join us in this very lucrative venture, click the link below and follow the instructions.

FIGURE 4.3

SCAM OFFER FOR STUDY 2

Then, respondents were asked to click "Yes, I would like to continue to learn more about this investment opportunity" or "No, I would not like to learn more about this investment opportunity". Participants' materialism was also measured using measures adapted from Griffin, Babin and Christensen (2002). Other demographics of the participants were also collected, such as age, income, and relationship status.

Results

An analysis of the difference in consumer click-through rate was conducted. There was a statistically significant difference in click-through rate between those who engaged in unconscious and conscious processing.

Click-Through Rate

A two-proportion z-test revealed a significant difference between unconscious and conscious processing with proportion of click-through rate being significantly higher for conscious ($P_{\text{conscious}}$ = .36, SD = .04) rather than for unconscious ($P_{\text{unconscious}}$ = .51, SD = .05), z = 2.49, $p <$ 0.05.

Moderated Mediation

A moderated mediation model using PROCESS model 7 (Hayes 2013) was run to test the hypotheses that materialism mediated the relationship between processing (conscious vs. unconscious) and interest in an offer, while relationship status of the subject moderated the relationship between processing and materialism.

The results of this analysis suggest that the relationship between processing and interest is mediated by materialism and moderated by relationship status. To test this, a bootstrap estimation with 5,000 resamples was conducted with interest as the independent variable, processing (conscious vs. unconscious) as the dependent variable, materialism as the mediator, and relationship status as the moderator (PROCESS model 7; Hayes 2013). The index of moderated mediation was significant (*B*= .09, SE = .05; 95% CI = 0.02, 0.21) indicating that moderated mediation is occurring. More specifically, we find that this relationship is moderated by a single relationship status (see Figure 4.4).

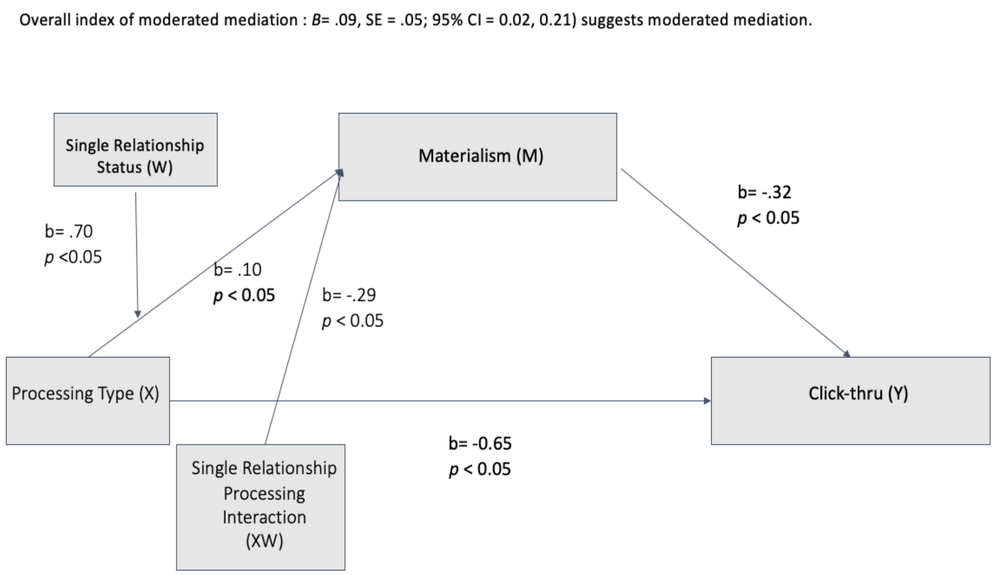

FIGURE 4.4

MODERATED MEDIATION FOR STUDY 2 RESULTS

Discussion

This study shows that by allowing consumers to participate in unconscious thought after being exposed to a single scam, results in a statistically significantly greater likelihood to not engage with the scam by clicking through for more information. The main finding from Study 1 is replicated in this study. In addition, the process is explored by testing materialism's relationship to fraud engagement and interest. We find that materialism mediates the relationship and that relationship status, specifically single relationship status, moderates the relationship. Our findings indicate that people who are single are significantly less likely to be materialistic and less likely to show interest in a scam investment offer. This supports claims found in prior literature regarding the importance of trait characteristics in predicting who is most likely to be victimized by investment frauds (DeLiema, Shadel and Pak 2020).

Study 3: Avoiding a Scam and Self-Esteem as a Moderator

The primary purposes of study 3 were to replicate the findings of study 1 and 2 under a different context and further explore the process that explains consumer characterization of an offer and their ability to identify the deception. In addition, we tested whether self-esteem functioned as a moderator. In this study, the results indicate that when asked about how legitimate the offer seemed, those participants who engaged in unconscious processing were significantly less interested and thought the offer was significantly less legitimate. Specifically, participants thought the offer seemed less legitimate and were less likely to believe it was a good offer after engaging in unconscious processing. I find that this effect is moderated by the participants' own reported self-esteem.

Participants and Procedure

This study had a design and procedure similar to study 2 with a 2 (unconscious vs. conscious) between subjects design. As with study 2, in this study we only showed one scam investment opportunity and included a very detailed description of the investment in order to increase complexity. In addition to the dependent variables of offer legitimacy and perceived nature of the offer (good/bad) we also measured self-esteem in order to test if a person's self-reported self-esteem would impact their ability to identify a legitimate offer. These measures included measures such as: "On the whole, I am satisfied with myself" and "I feel that I am a person of worth". This was tested by using PROCESS Model 1. According to past literature, self-esteem has had a meaningful impact on a person's likelihood to fall victim to a scam. This study's goal was to further examine that potential relationship.

Three hundred participants were recruited from an online panel to complete this study. Each participant was shown the fraudulent investment opportunity and asked to read it carefully. This offer involved an opportunity to become a part of a crowdfunding effort for a solar panel company (Figure 4.5). This type of scam was utilized because the Federal Trade Commission (FTC) has identified it as a common and often-fallen-for scam by the US consumer. I drew from examples on their website to provide validity to the offer type (Wu 2022). As in the first two studies, after seeing the crowdfunding investment opportunity participants were exposed to either conscious or unconscious processing tasks. The conscious and unconscious conditions remained the same as described in study 2. One change was that participants were asked to find nine words and were given an example word to illustrate how to solve the word search. The aim of this increase in words to find was to ensure that they spent enough time engaging in unconscious thought. There was no time limit on the word-search.

Then, respondents were asked "How legitimate does this offer seem?" and asked to evaluate it on a 7- point Likert scale. They were also asked to indicate on another 7-point Likert scale if they agreed with the statement: "I believe this is a good offer". Next, Participants' self-esteem was measured using measures adapted from Bond and Bunce (2003). Other standard demographics of the participants were also collected.

We Are Crowd-Funding Clean Energy!

You have the exciting opportunity to be a part of the innovative solar panel industry, but you need to act fast! We are a young company that needs motivated, intelligent investors like you to team up with us to accomplish our goal of helping people use cheap, clean energy.

Solar panels collect the sun's energy and send it to a battery to charge electric vehicles, power a house, or provide non-polluting energy for just about anything! Our company, Solar Vizions®, has a new design for a solar panel that is a major step forward for the industry. You may have not heard of us but that's because we sell directly to other businesses and they market the panels we make for them under their brand name. Our product is more efficient, lighter, and selling so fast we cannot keep up with demand. We need capital to expand production and we want to make sure that, like the sun's energy, everyone has a chance to benefit, so we have chosen to use a crowd-funding model.

Here's how it works. You choose the level of investment - any amount can buy you a piece of this exciting company! All investors will receive a certificate showing their level of monetary participation. After one year, you can receive double the face value of your certificate, or for every $100 of investment you can receive one of our new high efficiency solar panels, or for every $750 of investment you can choose to receive a high-capacity charging station, or you can choose some combination of the above listed dividends. For example, if you invest $200 now, in one year's time you could choose to receive a new industry-changing solar panel (that's the first $100) plus $200 in cash for the second $100 investment, or you could choose to simply double your money and receive $400 in cash.

We also have additional options for those who wish to invest smaller or larger amounts. For every $1000 of investment you can choose a very special package: after one year, one of our technicians will come to your home and install two of our highly efficient and durable solar panels on your roof, on your garage roof, in your backyard, or anywhere else that is feasible, along with a one of our high-capacity charging stations, so you can benefit from solar energy forever. If you choose to invest fewer than one hundred dollars, you will still receive double your money back! However, we have other choices, if you would prefer them. For every $20 investment, one year from now you can receive one of our special mini solar panels with cable. These mini panels are perfect for charging your cell phone, flashlight, or other small electronic devices when you are traveling, camping, or even just relaxing at home. Remember, you can combine these investment rewards in any configuration you would like!

Finally, for those who wish to invest more, but do not have the money on hand now, we offer a monthly payment investment. You can invest $20 per month and after the one-year period, you will have invested $240 and can receive $480 or your choice of the combination of benefits available at that investment level (such as one solar panel and $280).

We will be excited to update all our investors on our progress and we will be offering other investment opportunities as our organization grows. Join the hundreds of other people who see the "Vizion" of our company!

Click the link below to be taken to a secure site to make your investment!

FIGURE 4.5

STIMULUS USED IN STUDY 3

Results

A general linear model analysis of the difference in how legitimate the offer seemed and if the offer was believed to be a "good" offer was run. There was a statistically significant difference in the evaluation of legitimacy across conditions and there was a marginally significant difference in how "good" the offer was perceived to be across conditions.

Legitimate Offer

A one-way ANOVA revealed a significant difference between unconscious and conscious processing with how legitimate they found the offer to be. There was a significantly higher legitimacy rating for those in the conscious condition ($M_{\text{conscious}} = 4.18$, $SD = 1.81$) rather than for those in the unconscious condition ($M_{\text{unconscious}} = 3.70$, $SD = 1.88$), $F(1, 298) = 4.97$, $p < 0.05$.

Good Offer

A one-way ANOVA revealed a marginally significant difference between unconscious and conscious processing with how "good" they found the offer to be. There was a marginally significantly higher evaluation for those in the conscious condition ($M_{\text{conscious}} = 4.40$, $SD = 2.07$) rather than for those in the unconscious condition ($M_{\text{unconscious}} = 4.01$, $SD = 1.97$), $F(1, 298) = 2.79$, $p = 0.10$.

Moderated by Self-Esteem

A simple moderation model using PROCESS model 1 (Hayes 2013) was run to test the hypotheses that self-esteem moderated the relationship between processing (conscious vs. unconscious) and legitimacy of the offer.

The results of this analysis suggest that the relationship between processing and legitimacy is moderated by self-esteem. To test this, a bootstrap estimation with 5,000 resamples was conducted with legitimacy as the independent variable, processing (conscious vs. unconscious) as the dependent variable, and self-esteem as the moderator (PROCESS model 1; Hayes 2013). The interaction of processing and self-esteem was significant (*B*= .42, SE = .15; 95% CI = 0.11, 0.73) indicating that moderation is occurring. More specifically, we find that this relationship is moderated by low levels of self-esteem (*B*= -.84, SE = .26; 95% CI = -1.35, -.33).

Discussion

This study builds upon the results shown in the first two studies and shows that by allowing consumers to participate in unconscious thought after being exposed to a single scam offer, results in a statistically significantly greater likelihood to view the offer as illegitimate. The main finding from Study 1 is replicated in this study. In addition, the process is explored by testing self-esteem's relationship to offer evaluations. We find that low-self-esteem moderates the relationship. Our findings indicate that people with low self-esteem are significantly less likely to think the scam is legitimate. This supports claims found in prior literature regarding the importance of trait characteristics in predicting who is most likely to be victimized by frauds (Forgas 2019).

General Discussion

In this research, I examine how unconscious thought can impact consumers' ability to avoid scams. Specifically, I posit that consumers who take advantage of a distraction to engage in unconscious thought will be less likely to be tricked by fraudulent and scam offers. Through the course of three studies, I find evidence in support of the hypothesis and identify a moderated (relationship status) mediation (materialism). Furthermore, I find that the main relationship is moderated by low self-esteem.

Study 1, (using a blockchain technology scam offer) provided marginally significant evidence to support the main effect of the research: unconscious thought reduces the likelihood of scam victimization. I theorize that the effect was not stronger because the study's participant population consisted solely of well-educated young people (undergraduate college students). Based on the few demographic studies of financial fraud victims, this is not a population that is highly susceptible to this kind of crime. I therefore turned to a wider population in study 2.

Study 2 (using a fake company developing a product for use in electric vehicle batteries as the basis of a fraudulent offer) produced a significant main effect with a broad population in a different context. The results support the hypothesis that unconscious thought reduced the likelihood of scam victimization. In addition, the results from study 2 indicate moderated mediation with materialism as the mediator and participant relationship status as a moderator. Materialism was identified as the mediator of this effect and relationship status was found to moderate the relationship between materialism and processing mode. Previous demographic research has identified married males to be likely victims of scams and that more materialistic people tend to be, the more likely they are to fall victim to scams (DeLiema, Shadel and Pak 2020). Therefore, these moderation results are in line with previous research. However, it is not clear *why* relationship status functions as a moderator.

In Study 3, the primary goals were to replicate the findings of study 1 and 2 under a different context and further explore the process that explains consumer characterization of an offer and their ability to identify the deception. Specifically, we wanted to examine other trait characteristics of those exposed to these scams to see if self-esteem functioned as a moderator. The results indicate that those participants who engaged in unconscious processing were less interested in the fraudulent offer and thought the offer was significantly less legitimate. Specifically, participants thought the offer seemed less legitimate and were less likely to believe it was a good offer after engaging in unconscious processing. This effect is moderated by the participants' own reported self-esteem with low self-esteem participants significantly less likely to think the scam is legitimate. This finding is in line with previous research regarding mood as a potential moderator of gullibility (Forgas 2019). Taken together the results of these studies begin to examine when unconscious thought can benefit a person exposed to a scam and what factors may play a role in a person's likelihood to fall victim to a financial scam.

Theoretical Contribution

We contribute to unconscious thought literature by indicating that unconscious thought can benefit consumers as a way to avoid scams. This work can also be seen as an extension of lie detection literature (Hartwig and Bond 2011; Granhag and Stromwall 2004) through unconscious thought by building on previous work. Reinhard, Greifeneder and Scharmach (2011) found unconscious thought led to superior lie detection due to our unconscious's ability to process more information and more complex information, which is often found to be a prerequisite for detecting a falsehood. They found that UT allowed participants to integrate the information they received. I build on this by applying the benefits of UT to another area: scams and frauds. Specifically, this works focuses on financial scams and how to aid consumers in avoiding or identifying them.

This work also contributes to the literature on gullibility. To the extent that one considers victimization through frauds and scams the result of gullibility, this work indicates one specific area of consumer behavior – investment/fraud – "opportunities" in which UT can be useful in reducing gullibility and, therefore, crime.

Practical Contributions

The findings of this research have important practical contributions in helping safeguard consumers financial wellbeing and privacy. By identifying another way to aid consumers in making decisions, through the use of UT, the primary public policy aim of protecting consumers from harmful financial investments is aided. The FTC reports that as many as 80% of consumer fraud victims are individuals who are 65 or older (Skurnik et al. 2005). As mentioned at the beginning of this research, there is also a significant financial burden to being victimized in this way, with losses just in the United States of billions of dollars (Deevy and Beals 2013; Pouryousefi and Frooman 2019).

This work could be applied in an educational setting where consumers can begin to use UT when making complex financial decisions or when a financial offer is presented to them. The current work would contribute to a variety of educational strategies that have been found to aid people (Shkurnik et al. 2005), particularly those often targeted by frauds or scams, through written examples and materials (Park and Shaw 1992) and visual imagery (Law et al 1998).

In addition, financial institutions and companies that deal in related products and services including insurance and law firms could use this work as a training method for their clients. Informing clients of this personal resource – unconscious thought -- could serve the dual function of decreasing the amount of crimes perpetrated against their clients, but also increase the consumer's brand loyalty to legitimate finance-related businesses.

Future Research

Another common appeal used by fraudsters focuses on emphasizing the regulatory (specifically unregulated) nature of the "investment" (FINRA Foundation 2007). While this particular appeal is not examined in the three studies reported in this research, future studies will consider its role. This appeal allows the potential victim to imagine that they are "getting in on the ground floor" and ultimately making a more profitable investment decision. Even though one of the most common counter-fraud tactics is to always deal with authorized brokers and registered investments, the lure of seemingly limitless profits can persuade even experienced investors (Deliema, Shadel, and Pak 2020). In fact, Financial Conduct Authority (FCA) in 2016, found that "over a quarter (27%) of investment fraud victims age 55 and older lost money because they bought an unregulated product through an unauthorized broker" (Deliema, Shadel, and Pak 2020, p.906).

If a financial offer is unregulated or presents itself as unregulated some investors view this as an opportunity to make significant amounts of money because they are not "constrained" by a regulatory entity, such as the FTC. Since previous research in this area has worked to characterize and interview these past fraud victims, we know that one reason people engage with frauds stems from their belief that it will lead to them "get rich quick". Effectively making them less risk averse and more likely to engage with scams. It would be worthwhile to see if allowing consumers to engage in unconscious thought would benefit those less risk averse financial investors.

Another avenue that could be considered in the future are non-financial scams. These scams could focus on products and experiences that are "too good to be true" or tap into the emotional nature certain scammers employ (lonely hearts scammers). Another area of scam that could be interesting to investigate are multilevel marking companies (MLM). While MLMs may not all be scams by definition, there have been very public examples of those that are (ex. LuLaRoe, Horton 2021). These organizations might tend to draw in more women "investors/sales people" than men. As mentioned previously, most financial investors are men and many of the studies are skewed with very few woman investors. Perhaps we are not examining the potentially different way men and women invest and subsequently become scam victims. Consequently, are there different recommendations for how to help women avoid this victimization?

Future work could also consider real world data of people who have fallen for scam or fraudulent offers. The number of studies based on the confirmed experiences of scam victims are few and the database sizes are small. Unfortunately, it is not possible for legal reasons to obtain some of this data or it is extremely time-consuming to gather the data (sifting through police reports, then contacting the victims, many of whom will either refuse to talk to a researcher or will deny being a victim because they believe it embarrassing to admit they were tricked). However, if one had access to this type of information it would be meaningful to examine.

It could also be useful to find out why relationship status, specifically, single people, appear less likely to become victims of financial scams. Is it merely a function of age? Are they more likely to be victims of identity theft? Further examination of the underlying thought processes of single people and their ability to avoid scams may reveal additional insights. Research in these areas with a possible connection to unconscious thought could be beneficial.

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CHAPTER 5

CONCLUSION

Within a broad conceptualization of prosocial marketing, I address three main themes that characterize my research: the role of organizational justice, the importance of visual images, particularly magnified images, and the role of consumer processing of complex information. Organizations and especially consumers can benefit from research work done in each of these areas, making them worthwhile subfields for this and future studies. These essays investigate prosocial methods that marketers can use to encourage healthy food choices, to engage with consumers over shared organizational justice issues and that consumers can use to recognize and avoid the marketing of scams and fraud.

Organizational Justice

Essay 1 (Chapter 2) examined organizational justice (OJ) as the basis for a marketing message. It explored the potential impacts of organizational justice, finding that a company's claims about positive organizational justice can influence and persuade consumers. The studies carried out indicate that not all types of justice are equally effective as the basis for a marketing message. Marketing messages based on a company's interactional justice towards its employees consistently outperformed marketing messages based on distributive and procedural justice-based marketing messages. The chapter also begins to explain certain mediating effects at work, specifically that the effect is mediated by consumer perceptions of a company's altruism.

The essay also contrasts and compares organizational justice and corporate social responsibility (CSR) as marketing tools. The chapter details how the effects of CSR do not alter the impact of either high levels of organizational justice or low levels of organizational justice. Additionally, it describes the strength of an OJ marketing message compared to a CSR marketing message regarding purchase intention. Finally, the essay discusses how OJ could function as a possible marketing alternative to CSR that could be effective, simpler, cheaper, less risky, and offer additional benefits beyond marketing effectiveness, such as employee satisfaction.

Magnified Images

Essay 2 (Chapter 3) examined how image magnification can impact consumers' choice of healthier foods. It described how manipulating the magnification of healthy food items such that those items appear larger than normal increases perceptions of taste and impact preference by raising consumers' subjective comprehension of healthy food. This work also identifies a moderator to the effectiveness of magnification: a consumer's perception of a food item's indulgence.

These findings contribute to marketing literature related to health by showing that whereas healthy choices are more difficult to make, magnified images of food can increase subjective comprehension and improve decision-making results. Second, this research contributes to public policy by indicating a method through which public health officials can present food choices that can contribute to healthier consumer decisions.

Unconscious Processing

Essay 3 (Chapter 4) built on the findings of prior Unconscious Thought Theory (UTT) research, which showed how utilizing unconscious processing allowed participants to better identify lies (Reinhard, Greifeneder, and Scharmach 2011). Essay 3 describes how the use of distraction/unconscious thought provides a potential solution for consumers attempting to identify and avoid complex scams and frauds. The essay describes the evidence in support of distraction/unconscious thought and explains mediation through materialism and two moderators, relationship status and low self-esteem.

This work contributes to the literature by extending the application of unconscious thinking to situations of complex and costly scams and frauds. It contributes to theory by examining the relationship between materialism, low self-esteem, fraud victimization, and distraction/unconscious thought.

Future Research

Many other avenues of research regarding each of these topics in the area of prosocial marketing remain to be explored. These avenues could produce new marketing methods that companies and nonprofit organizations could employ that would help consumers make better, healthier, and safer choices and methods consumers could employ to help themselves make better purchasing decisions.

Regarding Essay 1 (Chapter 2), future studies could test the impact of cognitive load and ego depletion on consumer response to marketing messages based on organizational justice. If certain types of organizational justice maintain their impact on consumer behavior under high cognitive load that could indicate a high level of resiliency for marketing campaigns based OJ. A study that features ego depletion could be similarly useful. Such future studies could be particularly interesting if they were to show an improved response to procedural-justice-based marketing messages. Finally, it could be useful to create studies in which there is a test to determine if there is a boundary condition for the benefits of marketing messages based on justice, especially interactional justice. This research could attempt to determine if there is a negative impact to messages that consumers perceive as exemplifying “too much” organizational justice.

In relation to Essay 2 (Chapter 3), it could be beneficial to see if the magnification effect extends to beverages as well. Future work could also consider the visual medium used to show the food item. For example, seeing a magnified image in a video might result in a different response from consumers than the one created by magnified static images. The optimal amount of magnification could also be considered. There might be a boundary condition where a certain level of magnification of an image simply overwhelms consumers and becomes counterproductive. There are also several moderators that could influence the pattern of effects found in this research, for example, activation of health goals or package variety. Other potential mediators could be examined including concepts such as self-control and curiosity. Finally, other real behaviors such as a restaurant-based study could prove interesting.

Regarding Essay 3 (Chapter 4), future work could consider the role of regulation in scams. Some consumers might find an offer that is presented as "unregulated" appealing because they believe it is "unconstrained" by a regulatory entity, such as the FTC. Another avenue that could be considered in the future are non-financial scams. These scams could focus on products and experiences that are too good to be true or tap into the emotional nature certain scammers employ, such as lonely hearts scammers. Other areas of potential fraudulent behavior that could be interesting to investigate include multilevel marking companies (MLM) and scams that claim more women victims.

Future work could also investigate more real world data of people who have fallen for scam or fraudulent offers. Unfortunately, it is not possible for legal reasons to obtain some of this data or it is extremely time-consuming to gather the data (sifting through police reports, then contacting the victims, many of whom will either refuse to talk to a researcher or will deny being a victim because they believe it embarrassing to admit they were tricked). However, if one had access to this type of information it would be meaningful to examine.

It could also be useful to find out why relationship status, specifically, single people, appear less likely to become victims of financial scams. Is it merely a function of age? Are they more likely to be victims of identity theft? Research in these areas with a possible connection to unconscious thought could be beneficial.

Conclusion

Together, the three essays that make up this dissertation show that prosocial marketing techniques can fulfill an important function in assisting consumers make important purchasing decisions. Prosocial marketing can benefit companies and nonprofit organizations and their employees, while also providing value to consumers.