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This dissertation is dedicated to my family. Without their continued support, love, and encouragement, getting here would have never been possible.

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ABSTRACT

Crowdfunding campaigns increasingly utilize visual media in their funding appeals to potential backers. Prior research shows that inclusion of visual media positively relates to successful funding outcomes, yet what specific visual content drives backer decision making and the mechanisms behind why it does so remain largely unknown. This dissertation contends that crowdfunding performance is not influenced by whether the campaign simply includes visual media, but rather how backers respond to the specific visual content presented. Drawing from source credibility theory and research on visual heuristics, I propose that use of specific visual content can help entrepreneurs establish the credibility with potential crowdfunding backers needed to secure funding. Specifically, I suggest that certain visual cues common in crowdfunding such as images of the entrepreneur and new venture team, use of a logo, visual social media links, visual social presence, visual product specifications, prototype and product images, third-party endorsements and awards, as well as the overall aesthetic appeal of the campaign influence funding decisions by enhancing backer perceptions of campaign trustworthiness, expertise, and attractiveness. To test my hypothesized relationships, I draw from a sample of 1000 Kickstarter campaigns and complement this approach by also utilizing an experimental design to further explore the theoretical mechanisms underlying how potential backers interpret visual cues in crowdfunding campaigns. Results show that visual cues indicative of the dimensions of source credibility, when present in campaigns, have a positive influence on crowdfunding performance. Such findings offer needed clarity regarding the specific visual cues that influence crowdfunding outcomes and provide an underlying mechanism for why visuals matter in crowdfunding.

CHAPTER 1. INTRODUCTION

Crowdfunding has emerged as a popular and attractive alternative to more traditional venture financing options (Mollick, 2014). Yet, entrepreneurs utilizing crowdfunding still face many of the same challenges inherent with any new venture. Issues related to information asymmetry and lack of a reliable track record leave backers reluctant to commit funds to unproven concepts (e.g., Courtney, Dutta, & Li, 2017; Frydrych, Bock, Kinder, & Koeck, 2014). As such, entrepreneurs must be able to effectively communicate the quality and viability of their potential ventures in order to persuade hesitant backers to contribute to their campaigns.

Various aspects of the crowdfunding pitch can offer key informational and affective cues backers rely on when determining whether to fund a specific campaign. For example, rhetoric used to describe the venture can provide insight into the entrepreneur's intrinsic motivation (Allison, Davis, Short, & Webb, 2015) or optimism regarding the venture's prospects (Anglin, McKenny, & Short, 2016). Similarly, an entrepreneur's demonstrated passion in campaign videos for their venture can often be contagious with backers, and elicit an emotional connection that can drive funding decisions (Li, Chen, Kotha, & Fisher, 2017). Backers might also look for certain venture attributes thought to be strong indicators of venture quality in more traditional investment contexts. In particular, campaign human capital such as a high percentage of board members with advanced degrees or if the campaign creator has prior entrepreneurial experience can have a positive impact on crowdfunding performance (e.g., Ahlers, Cumming, Günther, & Schweizer, 2015; Piva & Rossi-Lamastra, 2018).

Although such pitch elements provide important information that can help establish venture legitimacy, each require time and a base level of attention for backers to analyze and process. However, given that backers can access tens of thousands active crowdfunding

campaigns at any given time (Drake, 2015), backers will likely look for heuristic cues in their initial assessments to quickly narrow down choices for further consideration (e.g., Chan & Park, 2015). Heuristics ease the cognitive load of decision making by focusing on aspects of the decision task that can be readily processed automatically and with little effort (e.g., Evans, 2008; Kahneman, 2003). In uncertain situations or when facing complex tasks, individuals rely on heuristics to make educated guesses and intuitive judgments as a means of streamlining decision making (Glöckner & Witteman, 2010). Because crowdfunding backers often lack the technical knowledge and investment experience to systematically analyze all the available investment options (Ahlers et al., 2015), heuristic cues allow backers to avoid information overload when evaluating crowdfunding campaigns.

One type of heuristic cue that has recently emerged in entrepreneurship research as having a substantial influence in shaping initial perceptions of new venture investment opportunities are visual cues (e.g., Chan & Park, 2015; Clarke, 2011; Townsend & Shu, 2010). Individuals process visual images more easily that they do written information (Posner, Nissen, & Klein, 1976). Consequently, visuals often enjoy primacy over other types of informational cues in affecting perceptions and judgments (Tsay, 2014). For example, the inclusion of product images in business plans is more effective at conveying the product's viability to potential investors than long, wordy explanations (Chan & Park, 2015). Visuals also generate affective responses in audiences that inform initial impressions, and dictate how subsequent information is considered and what further actions are taken (e.g., Lester, 2013; Meyer, Höllerer, Jancsary, & Van Leeuwen, 2013). For example, even if the content of the pitch is otherwise the same, positive affect generated by an entrepreneur's physical attractiveness alters how favorably the proposed venture is assessed (Baron, Markman, & Bollinger, 2006). Given that the digital and

web-based nature of crowdfunding makes visual content a highly prevalent aspect of many campaigns, and individuals prefer visual information over verbal in online settings (Townsend & Kahn, 2013), it is likely that visual cues play a critical role in affecting backer funding decisions.

Scholars exploring the influence of campaign visuals have thus far found evidence of a positive relationship with crowdfunding performance (e.g., Courtney et al., 2017; Mollick, 2014; Parhankangas & Renko, 2017). Yet, what is known about how visual cues actually affect funding outcomes remains limited. Current research has focused predominantly on the effect of just the simple inclusion of visual media (e.g., images, videos) rather than how the actual visual content presented might influence backer perceptions. Much of the extant literature suggests that use of visuals coveys venture quality in that their inclusion reflects some level of effort and care went into the campaign (e.g., Mollick, 2014; Scheaf et al., 2018). That visual content serves simply as a proxy for venture quality discounts information richness visuals can provide (Faber, Araúz, Prieto Velasco, & Reimerink, 2006; Lester, 2013). Seeing what a product looks likes or how it works adds a degree of context and clarity that simply cannot be fully replicated by text alone (Hill, 2012). Further, nearly all crowdfunding campaigns now include some type of visual element, yet less than half reach their funding goals (e.g., Dey, Duff, Karahalios, & Fu, 2017; Frydrych et al., 2014). This suggests that while the inclusion of visual media is a necessary condition to get funded, it alone is not a sufficient predictor of successful funding outcomes. As such, there remains a need to further identify and delineate the visual content that, when present, more directly relate to positive funding outcomes and why such content can affect backer funding decisions.

To begin addressing which visuals influence backer perceptions of crowdfunding campaigns and how they do so, I leverage source credibility theory to suggest that the presence

of specific visual cues helps the campaign establish credibility with backers. Source credibility theory suggests that the persuasiveness of a message in changing audience beliefs, attitudes, and behaviors is related to how credible the audience finds the message source (Hovland & Weiss, 1951; Pornpitakpan, 2004). Being perceived as credible is particularly critical for entrepreneurs as it engenders belief that the entrepreneur and their venture is capable of producing and delivering on what is being promised (e.g., Courtney et al., 2017; Krueger & Brazeal, 1994). As such, establishing credibility helps reduce uncertainty regarding the viability of the venture and, therefore, increases the likelihood that investors will be swayed to provide funding (e.g., Davila, Foster, & Gupta, 2003; Tirdatov, 2014; Zott & Huy, 2007). In online contexts such as crowdfunding, credibility is often derived from a quick and simple inspection of surface traits such as visual appearance and design characteristics (Fogg et al., 2003). This suggests that employing the right visual content can be particularly salient for entrepreneurs hoping to establish credibility for their crowdfunding campaigns.

Building off this premise, I examine how the presence of certain visual cues common in crowdfunding campaigns relate to and enhance how backers view the trustworthiness, expertise, and attractiveness of the campaign – the three attributes from which credibility perceptions are formed (e.g., Patzer, 1983; Pornpitakpan, 2004). When present, I contend that these visual cues serve as positive indicators that the entrepreneur and their venture are credible in their claims of being able to produce and deliver on what is promised. Consequently, backers will be more willing to help fund the campaign as they will have greater confidence that their contribution will yield the expected return.

This dissertation looks to make three key contributions to the entrepreneurship literature. First, while scholars have noted that use of visual media is a necessary condition for

crowdfunding success (e.g., Courtney et al., 2017; Mollick, 2014; Scheaf et al., 2018), little attention has been given to what specific visual content directly influences funding outcomes. As such, the relationship between visual content and crowdfunding performance is likely more nuanced and complex than what has been currently conceptualized. Taking this perspective, I argue the influence visuals have on crowdfunding performance is not simply their use in the campaign, but rather is dependent on what informational content is presented. To illustrate my proposed relationships, I leverage 1000 crowdfunding campaigns coupled with an additional experiment of 3,011 observations. The results represent an important step towards developing a more comprehensive understanding of how visual content influence crowdfunding outcomes. Additionally, my study responds to recent calls for clarity regarding what specific elements entrepreneurs should include in their crowdfunding campaigns to maximize funding likelihood (McKenny, Allison, Ketchen, Short, & Ireland, 2017).

Second, I adapt source credibility theory as an underlying mechanism to better explain why visual content maters in crowdfunding appeals and, more broadly, entrepreneurial fundraising efforts. Being perceived as credible is critical to entrepreneurs hoping to legitimize their ventures and acquire needed resources (e.g., Courtney et al., 2017; Tirdatov, 2014; Zott & Huy, 2007). Although a number of ways credibility can be established in new venture settings have been previously identified (e.g., Nagy, Pollack, Rutherford, & Lohrke, 2012; van Werven, Bouwmeester, & Cornelissen, 2015), such efforts lack theoretical grounding and consistency regarding what credibility is and how credibility is established. To my knowledge, no research has directly applied source credibility as a framework to understand what and why relevant informational or peripheral cues matter more in pursuing potential funders. What little research that has leveraged the source credibility dimensions to explore the link between venture

legitimacy and funding outcomes is fragmented at best, typically only considering the effect of a single dimension in isolation (e.g., Brooks, Huang, Kearney, & Murray, 2014; Kuckertz, Kollmann, Röhm, & Middelberg, 2015; Maxwell & Lévesque, 2014). In providing the first empirical test of source credibility theory in the crowdfunding context, my study sheds light on key underlying factors required to establish entrepreneurial credibility. Doing so offers source credibility as a valuable theoretical approach to the growing stream of research seeking to understanding how entrepreneurs can increase their likelihood of securing new venture funding (e.g., Parhankangas & Ehrlich, 2014; Pollack, Rutherford, & Nagy, 2012). Additionally, my findings add new insights to research seeking to better understand how visual cues shape perceptions of new venture opportunities (e.g., Chan & Park, 2015; Clarke, 2011).

Third, my dissertation adds empirical texture to source credibility research where understanding of the influence visual aspects of communication have on the establishment of credibility remains primarily conceptual. Current perspectives on credibility have been derived primarily from analysis of written and verbal communication (Pornpitakpan, 2004). Efforts to incorporate and operationalize visual indicators of credibility have been made, yet may lack large-scale empirical validation or isolate one specific aspect of credibility (e.g., Robins & Holmes, 2008; Skulmowski et al., 2016). In finding visual cues used in crowdfunding campaigns lead to heightened credibility perceptions across 1000 crowdfunding campaigns, this study offers needed empirical evidence supporting recent perspectives that visuals affect source credibility perceptions. Further, my theoretically-grounded approach for identifying visual proxies for each dimension of source credibility provides needed guidance for how future research might identify and test what other visual cues might influence credibility perceptions (e.g., Lowry, Wilson, & Haig, 2014; Robins, Holmes, & Stansbury, 2010).

Dissertation Organization

This dissertation proceeds as follows. In Chapter Two (Literature Review and Hypotheses), I review existing perspectives on how visuals influence how individuals make decisions and what that might mean for crowdfunding performance. Next, I elaborate on current findings in the crowdfunding literature, identify gaps in what we know regarding how visual content relates to funding outcomes, and introduce source credibility theory as a framework to further clarify this relationship. Then, I develop hypotheses linking specific visual cues commonly found in crowdfunding campaigns to the various dimensions of source credibility. In Chapter Three (Methods), I outline the samples, variable operationalization, and statistical techniques of both the archival study and experimental design I will use to test my hypotheses. In Chapter Four (Results), I detail the statistical analyses used to test my hypotheses and summarize the findings. In Chapters Five (Discussion) and Six (Conclusion), I discuss and summarize the key findings of this dissertation, identify limitations, and highlight potential avenues for future research.

CHAPTER 2. LITERATURE REVIEW AND HYPOTHESES

Visuals are an inherent aspect of human discourse. Similar to spoken language and the written word, visuals exist as an important mode of symbolizing, organizing, communicating, and passing on the knowledge required to construct meaning, inform perceptions, and make decisions (Meyer et al., 2013; Raab, 2017). However, unlike verbal or written communication where meaning is accessible only through a linear sequence of words, visuals present a certain immediacy that allow observers to ascertain information instantly (Meyer et al., 2013). Moreover, visuals contain an information vividness (e.g., information that is more descriptive and concrete) that cannot be replicated by language or text alone (Hill, 2012). Visuals add a layer of context and complexity that allow for a richer understanding of what is being presented (Hill & Helmers, 2012). For example, images and videos captured from the frontlines allow individuals to better comprehend the atrocities of war than can second-hand narrative accounts (Roeder, 1993).

Because visual information is processed automatically and often without conscious awareness (Van Leeuwen, 2012), visuals primarily serve as a heuristic people rely on when making decisions. Heuristics are mental 'shortcuts' that allow individuals to solve problems and make judgments quickly and efficiently (Tversky & Kahneman, 1974). Compared to analytical processing that can be overly complex and drawn-out in order to make a fully rational and optimal decision, heuristic processing is an automatic, implicit, and intuitive process where outcomes are not guaranteed to be perfect or optimal but instead sufficient for reaching an immediate goal and satisfactory solution (e.g., Evans, 2008; Gilovich, Griffin, & Kahneman, 2002). As such, heuristic processing often plays the more dominant role in governing human cognition and behavior (e.g., Kahneman, 2003). Accordingly, because visuals offer the most

direct and readily accessible source of information (Grady, 1993; Tsay, 2014), individuals will typically rely on visual cues as heuristics when further assessing a particular object or situation (e.g., Chan & Park, 2015; Townsend & Kahn, 2013).

In uncertain situations or when faced with complex decisions, individuals will use visual cues to fill informational voids and facilitate decision making (Andersen, Reznik, & Manzella, 1996). In this way, visual cues dictate how other relevant information is subsequently processed and ultimately influence how decisions are made. For example, physical appearance (e.g., dress, fitness, facial attractiveness) often affects how favorably or unfavorably hiring managers assess different job candidates who may otherwise have similar job relevant qualifications (e.g., Hosoda, Stone-Romero, & Coats, 2003; Lee, Pitesa, Pillutla, & Thau, 2015). Similarly, a product's physical appearance and visual appeal influence consumer purchasing decisions more than any other factor including price, brand reputation, and functional capabilities (Landwehr, Labroo, & Herrmann, 2011). Even in situations of informational overload, time pressure, or monetary incentives, the effect visual cues have on human behavior and decision making remains quite robust (Ambady, Krabbenhoft, & Hogan, 2006).

In entrepreneurial contexts where uncertainty and ambiguity is heightened, scholars have only recently begun to consider how visual cues influence key outcomes such as how resource providers assess new venture opportunities or whether they choose to provide financial capital. In an ethnographic study of three different entrepreneurs and their interactions with potential investors, Clarke (2011) finds that specific visual displays such as framed patents, professional dress, and driving high status cars contribute to investor impressions of entrepreneur legitimacy. Furthermore, use of specific colors and the inclusion of product images affects whether investors will favorably assess new venture proposals and business plans (Chan & Park, 2015; Mahmood,

Luffarelli, & Mukesh, 2019; Townsend & Shu, 2010). Similarly, an entrepreneur's physical attributes and attractiveness affect how investors perceive a new venture's viability and profit potential (Baron et al., 2006; Brooks et al., 2014). Even if the content of the pitch is otherwise the same, investors tend to be more persuaded by new venture proposals delivered by physically attractive, particularly male, entrepreneurs. Collectively, initial research suggests that visual cues influence perceptions of entrepreneurs and their ventures independently as well as affect how other information in the pitch or proposal is considered.

Visual cues can be especially salient in crowdfunding given that the dynamic and information-rich environment of most crowdfunding platforms can be potentially overwhelming for backers trying to cull relevant information needed to make an informed decision. At any given time, potential backers can access tens of thousands of active campaigns across more than 2000 internet-based platforms worldwide (Drake, 2015). To avoid information overload and better evaluate such a sheer volume of campaigns, backers will likely rely on heuristic processing to quickly determine a "go/no-go" decision on whether they should further consider the campaign (e.g., Franke, Gruber, Harhoff, & Henkel, 2006; Hall & Hofer, 1993). Given that most crowdfunding campaigns contain several visual media elements (e.g., images, graphics, videos), and that visuals serve as a powerful heuristic that can be leveraged to make quick assessments, the visual aspects of crowdfunding campaigns likely play an important role in whether the campaign will be successful.

Existing empirical evidence shows that use of visual content significantly influences crowdfunding performance (e.g., Courtney et al., 2017; Mollick, 2014; Parhankangas & Renko, 2017). However, nearly all campaigns now include some type of visual media, yet less than half ultimately meet their funding goals (e.g., Dey et al., 2017; Frydrych et al., 2014). This suggests

that while visual elements are necessary for getting funded, the relationship between visual content and crowdfunding performance is more nuanced and complex that what has been currently identified in the literature. Specifically, it is likely that simply the use of any visual artifact does not drive funding outcomes, but rather the presence of specific visual cues that more directly signify positive attributes of the campaign that affect crowdfunding performance. As such, there exists a need to further delineate the visual content and cues that backers rely on when considering and ultimately deciding to contribute to a crowdfunding campaign.

The Crowdfunding Context

Crowdfunding has surged in popularity in recent years as a viable financing alternative to more traditional outlets of new venture funding (e.g., venture capital, banks, angel investment) (Mollick, 2014). Through web-based platforms, entrepreneurs can fund their ventures through small sum contributions solicited from the general public rather than having to rely on large-scale investment from a relatively limited set of options (Ordanini, Miceli, Pizzetti, & Parasuraman, 2011; Short, Ketchen, McKenny, Allison, & Ireland, 2017). Such direct access to a broad range of potential investors and the funding potential it represents has seen crowdfunding emerge as a leading source of new venture funding where total funds raised is projected to surpass $300 billion by 2025 (Startups.com, 2018).

The rise of crowdfunding has coincided with the emergence of four distinct crowdfunding models based on the varying goals of both the entrepreneur and resource providers: equity, lending, donation, and rewards. Equity and lending-based models more closely align with traditional investment mechanisms as individuals provide capital with the expectation of future financial return (Allison, McKenny, & Short, 2013; Vulkan, Åstebro, & Sierra, 2016). Alternatively, individuals participating in donation-based crowdfunding do so with no

expectation of either financial or any other type of material reward (Lehner, 2013). In the rewards-based model, individuals contribute capital in exchange for some type of tangible, but nonfinancial, reward such as a special edition project (Frydrych et al., 2014). Although each model has gained in prominence and use, rewards-based crowdfunding remains the predominant model and one most commonly associated with crowdfunding (Fundable, 2019). As such, rewards-based crowdfunding will serve as the primary focus of my study.

Because rewards-based crowdfunding does not involve equitable financial exchange, individual contributors, commonly referred to as campaign backers and whose average contribution is around $25, more closely resemble and act like early customers than they do traditional investors (e.g., Belleflamme, Lambert, & Schwienbacher, 2014; Ordanini et al., 2011). These backers often lack formal investment experience nor are they likely to have the depth of technical expertise needed to make rational, informed economic decisions about a particular campaign (Allison et al., 2015; Lin, Boh, & Goh, 2014). Instead, decision making is often motivated by subjective factors such as the simple desire to obtain a novel product, contribute to an important social cause, or support an entrepreneur's dream (e.g., Allison et al., 2015; Josefy, Dean, Albert, & Fitza, 2016; Lin et al., 2014).

Although crowdfunding offers a substantial departure from more traditional funding options, entrepreneurs still must contend with issues related to backer uncertainty and information asymmetry common to all new ventures (e.g., Ahlers et al., 2015; Frydrych et al., 2014). Backers remain hesitant to risk financial capital, even at the relatively small amounts associated with crowdfunding, in exchange for entrepreneurial activities that are otherwise unproven and offer no guarantee of the expected return (Mollick, 2013). Even though relatively small or negligible contribution amounts do not expose backers to significant financial loss,

assurances are still needed that the campaign will be able to deliver what is being promised (e.g., Courtney et al., 2017; Frydrych et al., 2014). As such, entrepreneurs must be able to effectively communicate the underlying quality of their ventures if they are going to persuade backers to contribute to their campaigns (e.g., Ahlers et al., 2015; Davis, Hmieleski, Webb, & Coombs, 2017; Frydrych et al., 2014). One of the primary challenges for entrepreneurs is how to do so.

Previous crowdfunding research has applied a number of existing theories and examined the various aspects of the crowdfunding process to better understand the factors that influence funding outcomes (see Short et al., 2017 for a review). Signaling theory and legitimacy perspectives have been leveraged to consider how venture characteristics commonly viewed as strong indicators of viability (e.g., patent ownership, human and social capital, venture team composition) in traditional investment contexts similarly affect crowdfunding outcomes (e.g., Agrawal, Catalini, & Goldfarb, 2015; Ahlers et al., 2015; Frydrych et al., 2014). Such efforts highlight what characteristics, when present, help reduce backer uncertainty, yet often do not provide adequate explanation for how and why such factors ultimately persuade backers to contribute to a particular campaign.

Other research streams have explored how the narrative components of crowdfunding campaigns influence backer perceptions and decision making (e.g., Allison, Davis, Webb, & Short, 2017; Parhankangas & Renko, 2017). For example, entrepreneurs who use high degrees of positive language when describing their ventures can signal the hope and optimism they feel regarding the venture's prospects (Anglin et al., 2016; Anglin et al., 2018a). Additionally, framing the opportunity as a chance to help others (e.g., Allison et al., 2013) or support the local community (e.g., Josefy et al., 2016) similarly increases funding likelihood as crowdfunding backers can be as emotionally-driven as they are rational in their funding decisions.

Though venture characteristics and campaign narrative content contain important information regarding the quality and potential of the campaign, both require time and attention for backers to consume and process. However, given the sheer volume of campaigns for backers to consider and that most backers lack the knowledge and experience to systematically evaluate the numerous available options (Ahlers et al., 2015), backers are likely to rely on heuristic cues to speed up the process (e.g., Mahmood et al., 2019; Scheaf et al., 2018). Doing so can help backers quickly determine which campaigns offer both compelling and seemingly more viable opportunities that deserve further consideration. Because individuals "process images more easily that written information", backers will likely rely on campaign visual content and easy-to-process visual cues to avoid information overload in their initial assessments (Chan & Park, 2015, p. 732).

Recent research confirms that use of visual media positively relates to crowdfunding performance with most studies concluding that the use of visual media is a seemingly necessary condition for successful funding outcomes. However, limitations in how current research considers and measures campaign visual content creates an incomplete understanding of the relationship between campaign visual content and crowdfunding performance. For example, much of the current literature takes the perspective that inclusion of visual media suggests a certain degree of prior thought and effort went into the campaign and, therefore, can be indicative of higher-quality ventures (e.g., Mollick, 2014; Scheaf et al., 2018). More recent studies suggest that use of visual media can help reduce information asymmetries (Courtney et al., 2017). Such studies indicate that use of any visual content, regardless of the information presented, can positively affect funding decisions without considering what visual cues might be more or less influential in actually altering backer perceptions of the campaign.

In one of the first studies to examine the impact of specific visual cues, Mahmood and colleagues (2019) find that logo complexity influences baker perceptions of venture innovativeness and, in turn, affects how much backers contribute to a campaign. Though their findings represent the first targeted approach needed in crowdfunding research, understanding on how visual content affect crowdfunding outcomes remains limited and lacks focused attention (e.g., Mahmood et al., 2019; Scheaf et al., 2018). Consequently, in order to develop a more complete understanding of how backers absorb and evaluate information provided, there exists a need to further specify the visual cues most likely to positively impact funding outcomes.

In an effort to address this gap, I examine different visual cues commonly used in crowdfunding campaigns to identify the specific visual cues that are most relevant to backers when assessing crowdfunding campaigns. Specifically, I propose that the identified specific visuals are heuristic cues whose presence backers depend on when initially considering a particular campaign. Due to the online nature of crowdfunding and its information rich environment, backers will likely rely on visuals when judging and assessing information as a way to save time, simplify their search, and avoid confusion (e.g., Fogg et al., 2003; Metzger, 2007; Townsend & Kahn, 2013).

To add a theoretical explanation for how and why the presence of specific visual cues influence backer perceptions, I leverage source credibility theory to suggest that visuals can be important mechanisms in helping the campaign establish credibility with backers. Credibility is a critical attribute in entrepreneurship in that it provides assurances that the entrepreneur and their venture have the ability to produce and deliver on what is being promised (e.g., Courtney et al., 2017; Davila et al., 2003; Krueger & Brazeal, 1994). In online contexts such as crowdfunding, credibility is often derived from a quick and simple inspection and initial judgment of surface-

level traits such as visual appearance and physical characteristics (Fogg et al., 2003). Thus, it can be expected visual cues play a critical role in how credible backers perceive campaigns and the associated venture to be. For the remainder of the dissertation, I develop and test a series of hypotheses linking specific visual cues to the different factors that contribute to enhanced perceptions of credibility.

Source Credibility Theory and Visual Cues in Crowdfunding

Source credibility refers to a communicator's positive characteristics that influence whether a receiver is more likely to accept the message delivered by the source (e.g., Ohanian, 1990; Pornpitakpan, 2004). More specifically, credibility is the extent to which the message source is perceived to be believable, competent, and trustworthy in how they convey a message (Petty & Cacioppo, 1986). When perceived source credibility is high, message recipients are more likely to be receptive to the message and relevant information being presented than when perceived source credibility is low (e.g., Dou, Walden, Lee, & Lee, 2012; Pornpitakpan, 2004). Consequently, source credibility can have a significant influence on how persuasive a message will be in changing audience attitudes, beliefs, and behaviors (O'Keefe, 2015). Thus, for entrepreneurs who must persuade hesitant investors that their ventures are viable and worthwhile investment opportunities, establishing source credibility can be essential for securing needed resources (e.g., Courtney et al., 2017; Davila et al., 2003). Related to crowdfunding, source credibility can be a critical factor in getting campaigns noticed and inducing contributions from potential backers (e.g., Solidaridad Latina, 2018; Tirdatov, 2014).

Modern academic perspectives on source credibility first emerged during World War II as the United States sought to understand and enhance public support of the war. This interest sparked Carl Hovland and his Yale colleagues to launch an ambitious study on communication

and attitude change with the intent to develop a more systematic theory of persuasion (Metzger, Flanagin, Eyal, Lemus, & McCann, 2003). One key outcome of their efforts was the conceptualization of credibility as a receiver-based, multi-dimensional construct (e.g., Hovland, Janis, & Kelley, 1953; Hovland & Weiss, 1951). Building off this perspective, McCroskey (1966) suggested that recipient-based credibility perceptions of the source delivering the message dictate the persuasiveness of a message itself. This perspective launched several hundred empirical efforts looking to determine the dimensions of source credibility from the receiver's perspective.

Efforts to understand the underlying factors that affect source credibility have identified and defined three specific attributes: trustworthiness, expertise, and attractiveness (e.g., Metzger et al., 2003; Pornpitakpan, 2004). Related to source credibility, trustworthiness is the degree of confidence that the source is seen as honest and forthcoming when delivering the message and will provide valid and truthful information (e.g,, Hovland et al., 1953; Pornpitakpan, 2004). Expertise refers to the degree to which the source is thought to have the underlying knowledge or skill required to deliver accurate, correct, and technically valid assertions (e.g,, Hovland et al., 1953; Pornpitakpan, 2004). Attractiveness refers to the degree to which receivers find either the source or the presentation of the message visually appealing (e.g., Ohanian, 1990; Patzer, 2012).

Taken together, the three factors that influence source credibility perceptions have been examined in a number of applied fields to better understand human behavior and decision making (e.g., Cheung, Luo, Sia, & Chen, 2009; Goldsmith, Lafferty, & Newell, 2000; Jin & Phua, 2014). For example, how credible voters find a particular political candidate to be, especially as it relates to trustworthiness, often dictates how they will vote (e.g., Levi & Stoker, 2000; Yoon, Pinkleton, & Ko, 2005). Numerous studies on consumer behavior have shown that

businesses seen as being more credible than competitors are more successful in attracting new customers and will not be punished for charging higher prices (e.g., Erdem, Swait, & Louviere, 2002; Sweeney & Swait, 2008). For example, consumers find advertising campaigns who utilize attractive celebrities or well-known experts to endorse the product more persuasive than campaigns who do not (e.g., Dean & Biswas, 2001; Spry, Pappu, & Bettina Cornwell, 2011). Perceived credibility is particularly critical in online retail where purchase decisions are influenced by both how credible consumers find those who provide online reviews (e.g., Ayeh, Au, & Law, 2013; Kusumasondjaja, Shanka, & Marchegiani, 2012) and whether vendor websites can be considered trustworthy, especially as it relates to transaction security (e.g., Ganguly, Dash, Cyr, & Head, 2010; Gefen, Karahanna, & Straub, 2003).

Applied to the entrepreneurial context, perceived source credibility similarly dictates how investors view and decide to invest in new venture opportunities (e.g., Davila et al., 2003; Krueger & Brazeal, 1994; Zott & Huy, 2007). Being seen as credible can help entrepreneurs ease concerns regarding their ability to produce and deliver the product or service as promised despite lacking a reliable track record of doing so (Courtney et al., 2017). Though establishing credibility has been identified as an integral aspect of the fundraising process, prior research has yet to fully utilize source credibility as a theoretical framework to define how entrepreneurs are specifically able to do so. Because visual and non-verbal cues affect credibility perceptions (e.g., Lowry et al., 2014), applying source credibility theory to crowdfunding offers a logical theoretical basis to begin building a better understanding of how, why, and what specific visual campaign content affects crowdfunding performance.

To further delineate how visual content of crowdfunding campaigns influence credibility perceptions and funding outcomes, I develop and test a series of hypotheses to demonstrate how

the presence of specific visual cues in crowdfunding campaigns relate to and help enhance perceptions of trustworthiness, expertise, and attractiveness.

Trustworthiness

Trustworthiness is the belief that the source will make truthful and valid claims that are delivered honestly and objectively (Hovland et al., 1953; Pornpitakpan, 2004). Similar to how trust is developed in organizational settings, an audience's trust of a message source is contingent on their willingness to accept vulnerability based on their positive expectations of the intentions or behaviors of others (e.g., Fulmer & Gelfand, 2012). Trust reflects the level of confidence that the trusted party will act with benevolence or operate in good faith in their dealings and interactions (e.g., Colquitt & Salam, 2009; Mayer, Davis, & Schoorman, 1995). Trust is also fostered through a sense that the trusted party will act with integrity or the belief that they will adhere to values such as honesty and openness (e.g., Colquitt & Salam, 2009; Mayer et al., 1995). Although broader definitions of trust also incorporate the ability or competence of the trusted party to follow through on the claims being made (e.g., Mayer et al., 1995), source credibility considers that aspect of trust as a separate component of credibility within expertise. This important distinction means that, as it relates specifically to source credibility, trust is concerned only with the characteristics, perceived motives, and behaviors of the message source (McKnight, Choudhury, & Kacmar, 2002; Ohanian, 1990). Any belief that the message source is deceitful, self-interested, or is making claims that cannot be substantiated will erode audience trust (e.g., Dou et al., 2012; Umeogu, 2012).

Numerous factors can influence whether an audience finds a source to be trustworthy, particularly in online contexts where the audience often lacks prior history with the source (Fogg et al., 2003). In such situations, audiences rely on informational cues and heuristics that can

indicate what level of trust audiences can have in what is being presented (Metzger & Flanagin, 2013). Among the most important is a known identity, or that the source is explicit in who or what is making the claim and presenting the message (e.g., Jessen & Jørgensen, 2012; Kusumasondjaja et al., 2012). Knowing who is behind the information or what is being asked enhances the trust placed in what is being presented. Consider news from a named source (e.g., White House Communications Director) compared to news from an anonymous one. Trust can also be built through social validation, or large-scale verification made by others of the source and the validity of the source's claims (e.g., Jessen & Jørgensen, 2012; Palmer, Bailey, & Faraj, 2000). Individuals are more likely to trust the assertions of a source if the source has been acknowledged or verified by others as being legitimate and truthful. Finally, trust can be enhanced through the inclusion of objective and verifiable information that provide additional reference points regarding the source's credentials and reputation. For example, online stores that list a physical address or include privacy seals are more likely to be trusted by consumers and, consequently, more likely to receive their business (Metzger, 2007).

Trust in entrepreneurship is particularly salient in that it can lower the transaction costs and risks inherent with investing in unproven ventures (e.g., Bammens & Collewaert, 2014; Welter, 2012). Investors deal with the unknown when considering new venture opportunities, unsure whether the entrepreneur and venture will ultimately achieve and deliver the intended results. As such, trust becomes a critical aspect of entrepreneurial financing in that it allows for the suspension of vulnerability and uncertainty (the leap of faith) investors face (Mollering, 2006). Because new ventures lack reliable track records from which trust can be established, entrepreneurs must work to provide relevant informational cues that they can be trusted (Maxwell & Lévesque, 2014; Welter, 2012).

In crowdfunding, backers are asked to often provide financial capital before product creation or venture launch. Therefore, backers must put an inherent level of trust that the campaign will be able to fulfill its promises and deliver the offered reward as expected (Gerber & Hui, 2013). Thus, showing that backers can trust that the entrepreneur and campaign will meet their obligations is key to persuading backers to contribute to the campaign (e.g., Kang, Gao, Wang, & Zheng, 2016; Zheng, Hung, Qi, & Xu, 2016). Trust in crowdfunding can be product-related (e.g., belief that the product will function as promised) or entrepreneur- and venture-related (e.g., belief that the entrepreneur is truthful in their claims). Because crowdfunding backers likely will not have prior experience to accurately access either, certain visual cues can provide relevant information backers might need to determine how much trust they can give the campaign.

Research in communications, marketing, and information systems has identified a number of visual cues in advertising campaigns and websites that can enhance the trust consumers put in what is being offered and presented (e.g., Fogg et al., 2003; Karimov, Brengman, & Van Hove, 2011; Metzger & Flanagin, 2013). Building of this prior work, I explore how visual cues that have been shown to increase the trust audiences place in a source might lead to similar outcomes in crowdfunding (e.g., Gefen & Straub, 2004; Halpern & Gibbs, 2013; Jessen & Jørgensen, 2012; Lowry et al., 2014; Metzger, Flanagin, & Medders, 2010). Specifically, I consider how four visual cues common in crowdfunding campaigns - entrepreneur visibility, use of a logo, social media profiles, third-party testimonials, and social presence – can serve as positive indicators of trustworthiness. When included within a crowdfunding campaign, these visual cues offer relevant indicators on whether backers should further consider the credentials of the entrepreneur or whether claims regarding product viability should be believed.

Entrepreneur Visibility Identifying oneself, that is making oneself known through revealing your name or some other distinctive and recognizable information, is essential to developing trust with audiences (e.g., Jessen & Jørgensen, 2012; Kusumasondjaja et al., 2012). Concealing one's identity, or remaining anonymous, disregards current cultural preference for identification and makes it difficult for others to further evaluate the credentials and legitimacy of a message source (Marx, 1999; Rains, 2007). Doing so makes it appear that the message source is not willing to stand behind their claims (Williams, 1988). Conversely, having a known identity garners audience trust in that it suggests the source is more motivated to be honest and stands behind their assertions (Jessen & Jørgensen, 2012). Further, audiences are more likely to believe and be persuaded by sources with whom they have much in common, such as sharing similar demographic characteristics (e.g., Jensen, Davis, & Farnham, 2002; Spence et al., 2013).

Knowing the entrepreneur or team responsible for the crowdfunding campaign can build trust with backers who are as motivated by a desire to support an aspiring entrepreneur as they are a desire for a particular product or service (e.g., Spinelli & Adams, 2012). Therefore, seeing the people behind the project lets backers feel confident in knowing who exactly is receiving their support and money. Further, because backers are not able to engage directly with the entrepreneurs (e.g., Courtney et al., 2017; Piva & Rossi-Lamastra, 2018), being able to put names and faces to the venture allows backers to know specifically who is responsible for delivering on the campaign's promises. Though entrepreneurs might include their pictures within the campaign for purely self-interested or narcissistic reasons (e.g., Anglin, Wolfe, Short, McKenny, & Pidduck, 2018b), backers likely will see such pictures as a way to better connect with the people behind the project. Doing so can further motivate decisions to provide funding as

many backers are driven by the desire to those they develop some form of connection with as they are the desire for the reward being offered (e.g., Gerber & Hui, 2013).

Profiles of users who created and launched the campaign might offer insight into who is behind the campaign, however such profiles do not necessarily provide objective information from which a specific identity can be derived (Cumming, Hornuf, Karami, & Schweizer, 2016). Because online profiles can be created by anyone at any time and often require minimal and non-verifiable information to be activated, little credence is given to online profiles that are otherwise not connected to a known party (e.g., Ayeh et al., 2013; Jessen & Jørgensen, 2012). Further, many profiles correspond to the venture itself rather than an individual entrepreneur, leaving ambiguity as to who specifically is responsible for the campaign. Finally, identifying information contained within a user profile requires additional effort to extract (visiting a page separate of the campaign itself) and, thus, is not likely to be a reliable visual cue that backers can quickly assess and process. As such, visual identification of the entrepreneur or new venture team within the context of the campaign itself is the most direct indicator of who is behind that campaign.

Venture Logo Logos provide an identifiable visual representation of an organization or product through some type of graphic design that can include a name, symbol, or trademark (Henderson & Cote, 1998). Logos offer the first impression of an organization and provide insight into its distinctive attributes and what it wants to be (e.g., Foroudi, Melewar, & Gupta, 2014; Van Riel & Van den Ban, 2001). What shapes, symbols, fonts, and colors are used to define the logo shapes how others perceive and recognize the organization.(e.g., Hagtvedt, 2011; Ridgway & Myers, 2014). As such, logos are an inherent aspect of the organization's identity (Van den Bosch, De Jong, & Elving, 2005).

Designing a venture logo is often one of the first things entrepreneurs do in order to establish an identity and brand awareness with investors and customers (Bresciani & Eppler, 2010). Simply having a logo where some level of design effort is apparent, even if the design quality is low, can be a positive indicator to investors regarding an entrepreneur's intentions to see the venture through. Logos represent a move of the venture from a concept in the mind of entrepreneurs to an accepted reality in the minds of others and that some level of prior thought and effort has put into giving the venture an existence (Bresciani & Eppler, 2010; Rode & Vallaster, 2005). Investors are likely to more readily accept the venture as credible if they have developed a logo, and will use the logo design to further assess the venture's potential and viability (Mahmood et al., 2019). As such, crowdfunding campaigns that have logos can install trust in backers that campaign is a well-thought-out venture that the entrepreneur has some level of commitment to seeing through rather than a hopeful idea that has been hastily put together.

Social Media Profiles Social media profiles (e.g., Facebook, Twitter) provide external reference points suggesting that the venture is an established entity beyond simply existing as a crowdfunding campaign (Fuchs, 2017; Jessen & Jørgensen, 2012). Linked social media profiles can offer additional information, such as photographs or real time updates, that might not otherwise be apparent and compensate for the lack of interpersonal interaction online contexts afford (Lim & Van Der Heide, 2014). Further, social media profiles reduce anonymity in communication, holding the venture and the individuals behind it more accountable for the validity and truthfulness of the information they provide (Halpern & Gibbs, 2013).

Social media has emerged as an effective method for entrepreneurs looking to add legitimacy and credibility to their ventures. An expansive social media presence can help generate word-of-mouth 'buzz' and establish a relatively large social network to further build the

venture's brand (e.g., Aral & Walker, 2011; Yang & Berger, 2017). Most importantly, however, is that social media facilitates the venture's acceptance as a viable entity needed to secure additional resources (Antretter, Blohm, Grichnik, & Wincent, 2019). As such, social media accounts linked to crowdfunding campaigns have been identified as important conduits for promoting the campaign, updating campaign status, and providing key information about the entrepreneur backers might use in their decision making (e.g., Anglin et al., 2018b; Lu, Xie, Kong, & Yu, 2014). Moreover, backers will often search for social media profiles if not directly provided by the campaign before deciding whether they will fund a campaign (Kim, Kong, Karahalios, Fu, & Hong, 2016). Given this importance, visual indicators that the venture has a social media presence provided within the context of the campaign is likely to be an important visual reference to the venture's established identity backers might look for when determining how credible a campaign is.

Social Presence Social presence is the extent to which individuals experience others as being psychologically present. It is the feeling that an exchange involves real people (Gefen & Straub, 2003; Short, Williams, & Christie, 1976). Trust is built through constructive interactions with other people, whether face-to-face or through other means such as email correspondence and phone calls (Blau, 2017). In situations that typically involve no direct contact with other people, such as online shopping, any attribute of the experience that evokes heighted social presence can be critical for establishing trust (e.g., Gefen & Straub, 2004; Lu, Fan, & Zhou, 2016). This can be achieved through the use of pictures, videos, avatars, and audio recordings that specially include human elements which can approximate interpersonal interactions and experiences. For example, an online store whose products are modeled by actual people rather than pictured alone. Such instances reduce ambiguity and uncertainty related to what is being

communicated and instill a greater sense of confidence and trust (Cyr, Head, Larios, & Pan, 2009; Hassanein & Head, 2007).

Social presence can be particularly effective in online product transactions, similar to what occurs within crowdfunding. Products offered online tend to be displayed with little or no social appeal, accompanied only by listed attributes and functional descriptions (Gefen & Straub, 2003). Though such information is needed to make informed purchase decisions, how the product works in a functional setting or what individuals might use the product for remains ambiguous (Hassanein & Head, 2007). High social presence reduces this uncertainty in that individuals can better visualize what their experience with the product would be like and how the product would function in real world settings. For example, online retail stores that show clothing being worn by actual individuals allow customers to gain a better sense of how the clothes might fit, what other pieces go with particular item, and where the clothes might be worn (Hassanein & Head, 2007). Rather than being told how a product works, being able to see the real-world use garners trust that the claims being made are honest and can be replicated in the individual's own personal experiences.

Applied to crowdfunding, high social presence can be critical in the campaign building trust with backers. Because backers are not able to personally interact with and assess a product or service, seeing it demonstrated by real people and in social settings can help backers better determine the viability of the venture and whether the claims being made are correct. As such, visual campaign content with high social presence, images and pictures with human involvement, are likely to inspire a greater degree of trust from backers that the campaign is honest in their presentation.

Taken together, visual cues that signify the entrepreneur(s) and their crowdfunding campaigns can be trusted to provide honest, valid, and truthful information regarding the product and related venture being proposed can help establish needed credibility with backers. Thus, the extent to which trustworthiness visual cues are present in crowdfunding campaigns will enhance how credible backers perceive the campaign to be and, subsequently, increase the likelihood the campaign will be funded.

Hypothesis 1a: Inclusion of trustworthiness visual cues is positively related to the perceived credibility of crowdfunding campaigns.

Hypothesis 1b: Inclusion of trustworthiness visual cues is positively related to crowdfunding performance.

Expertise

Expertise, as defined within the context of source credibility, is the belief that a source possesses the required knowledge, experience, or skill to make valid and true assertions (Hovland et al., 1953; Pornpitakpan, 2004). Expertise describes the extent to which the source can be considered an informed authority on the subject matter being presented that allows them to be capable of successfully delivering what is being promised (Berlo, Lemert, & Mertz, 1969; Erdogan, 1999). Perceived expertise is generally derived from evaluations of two key criteria: technical competence and practical competence (Farr, 2007; O'Reilly & Marx, 2011). Technical competence refers to the degree of specialized skill, specific ability, formal education, and explicit knowledge the source has to produce the expected outcome (e.g., Braunsberger & Munch, 1998; Farr, 2007). Practical competence refers to capabilities gained from the source's previous experiences in a specific field or area, often acquired through extensive practice, prior work experience, and the trial and error process (e.g., Braunsberger & Munch, 1998; Farr, 2007).

Entrepreneurs who can readily position themselves as experts in what they are proposing are viewed more favorably by investors and, therefore, more likely to get funding for their ventures (e.g., Baum & Silverman, 2004; Hsu, 2007). That is because expertise suggests the requisite competence and capability needed to deliver as promised, reducing uncertainty regarding both the short- and long-term prospects of the venture. Perceived expertise can also help to mitigate concerns related to information asymmetry by revealing discrete information about the entrepreneur's ability to produce a quality product or service (e.g., Courtney et al., 2017).

In crowdfunding campaigns, potential backers often view their contributions more as a one-time purchase of a desired product rather than a high-risk long-term investment. However, crowdfunding contributions still involve financial risk as most crowdfunding projects represent new ventures with unproven concepts and not fully developed products (e.g., Frydrych et al., 2014; Parhankangas & Ehrlich, 2014). As such, backers still look for assurances that the entrepreneur and their venture are able to produce and deliver the expected reward or return as specified (e.g., funcational; Chan & Parhankangas, 2017; Courtney et al., 2017). Because backers cannot directly engage with the entrepreneur nor physically interact with the offered product, determining whether the entrepreneur has the skill or ability to deliver as promised presents a challenge. Thus, visual cues that provide insight into an entrepreneur's technical knowledge and help demonstrate their practical capabilities can offer needed clarity regarding the underlying expertise of the entrepreneur.

Research in communications, marketing, and information systems has identified a number of visual cues in advertising campaigns and websites that can convey a source's competency and expertise to audiences (e.g., Clow, James, Kranenburg, & Berry, 2006; Lowry et

al., 2014; Metzger et al., 2003). Building off this prior work, I explore how visual cues that have shown to increase perceptions of the level of expertise a source has might lead to similar outcomes in crowdfunding (e.g., Sine, David, & Mitsuhashi, 2007; Yang, Hsee, Liu, & Zhang, 2011; Zhang, Vonderembse, & Cao, 2009). Specifically, I consider how three specific visual cues common in crowdfunding campaigns - visual product specifications, prototype and product images and, visual third-party endorsements, award, and certification - that, when present, might serve as positive indicators that the entrepreneur or new venture team possesses the expertise and competence to successfully deliver on the promises made in the campaign. When included within a crowdfunding campaign, these visual cues offer relevant indicators of the entrepreneur and venture's technical or practical competence to be able to deliver on the claims of the campaign that help establish credibility with potential backers.

Visual Product Specifications Technical and design specifications refer to the defining information and detailed explanations of a product's design, materials, and functional components (Ulrich, 2003). Presented visually, specifications provide an overall blueprint for how the product is assembled and how its various components function together to operate (Maussang, Zwolinski, & Brissaud, 2009). Moreover, specifications highlight distinguishing characteristics of a product such as unique features or capabilities that are indicative of overall technical quality and performance potential (Van Kleef, Van Trijp, & Luning, 2005). For example, digital camera producers might use product specifications to signify the quality of their cameras by emphasizing features such as maximum optical zoom, total number of effective pixels, and total frame rates (e.g., Nikon, 2019).

Beyond offering important information regarding the function or features of a product, visual specifications can be reflective of the designer's or producer's technical knowledge and

proficiency. In providing detailed descriptions of the various components and demonstrating how they work together to produce the expected outcomes, specifications reveal an understanding for what is explicitly required to fully ensure proper functionality and quality (Otto, 2003). Such information influences individual decision making in that it offers an objective data point to rationalize choosing one option over another (e.g., Hsee, Yang, Gu, & Chen, 2008; Sela & Berger, 2012; Yang et al., 2011). For example, Hsee and colleagues (2003) found that given the choice between two speakers, respondents most often went with the one with an explicit description of wattage (objective specification) over the one simply described as delivering a rich sound (abstract attribute). Even if individuals experience a product firsthand, such as viewing televisions in a store, they will still defer to objective specifications over subjective experiences when available in their final decision making (Hsee, Yu, Zhang, & Zhang, 2003). That is because specifications offer the most quantifiable evidence of product quality and offer individuals a more accurate approximation of what future experiences with the product will be like (Yang et al., 2011).

Visual specifications can offer especially information relevant for potential backers assessing crowdfunding campaigns. Most crowdfunding projects involve unproven products often still in-development (Parhankangas & Ehrlich, 2014), creating uncertainty on if the final product will function as advertised or is even feasible (e.g., Courtney et al., 2017). In providing visual specifications, entrepreneurs can indicate to potential backers that the entrepreneur understands the technical requirements needed to deliver the final product. As such, seeing visual specifications within the campaigns suggests that the entrepreneur possesses at least the basic technical understanding and competence required to deliver a successful outcome.

Prototype and Product Images A prototype is a physical model of a product that has nearly identical attributes, aesthetics, usability, and quality to the finished version (Rudd, Stern, & Isensee, 1996; Zhang et al., 2009). Physical, working models provide consumers a real-world, interactive preview of the product where they can directly assess appearance, feel, and functionality (Rogers, Sharp, & Preece, 2011). Further, prototypes and subsequent functional demonstrations offer visual conformation that a product idea or vision can ultimately be realized. Such tangible proof provides assurances that business and designers should be able to turn ideas and concepts into viable products (Zhang et al., 2009).

Prototypes can serve as strong indicators of new venture viability and feasibility (e.g., Audretsch, Bönte, & Mahagaonkar, 2012; Huang & Pearce, 2015). Entrepreneurs are able to provide potential investors and resource providers tangible evidence that their ideas can be developed into viable commercial products, reducing perceived technological risk (Zott & Huy, 2007). Prototypes also makes obtaining patents more likely and allows investors to better understand future product resource needs and manufacturing costs, easing uncertainty regarding venture viability and sustainability (Audretsch et al., 2012). Additionally, functional prototypes suggest that entrepreneurs possess the technical competencies and knowhow required to deliver a finished, marketable product (Audretsch et al., 2012). As such, new and early stages ventures that have fully developed, demonstrable prototypes improve their likelihood of acquiring resources (e.g., Aldrich, 1999; Audretsch et al., 2012; Zott & Huy, 2007).

Perhaps the biggest benefit prototypes offer new ventures is the opportunity for investors and resource providers to experience products first-hand. However, crowdfunding does not afford this opportunity. Rather than being able to see and feel the product for themselves, potential backers are instead left having to infer functionality and whether the claims made by

entrepreneurs can produce a viable product (Courtney et al., 2017). To help address these potential information asymmetries, images of the product in its physical form or at various stages of prototyping offer a proxy to in-person demonstrations. These pictures offer visual evidence that the venture has moved from computer renderings and graphic illustrations of a conceptualized idea towards a tangible, realized product. Further, including images from various iterations of the product development process shows how the product has evolved and improved through various testing and trials. As such, backers will view such images as positive indications that the entrepreneur has gained the practical competence through various trials and experience needed to deliver the final product as promised.

Visible endorsement, award, and certification Entrepreneurs can gain legitimacy for themselves and their ventures through winning industry awards or receiving endorsements from reputable third-parties (Pollock, Rindova, & Maggitti, 2008; Zott & Huy, 2007). Similarly, product certification adds legitimacy by indicating that the product passed performance and quality assurance tests while meeting government or industry regulation and specification criteria (e.g., Rao, 1994; Söderblom, Samuelsson, Wiklund, & Sandberg, 2015). Each serve as a formal acknowledgement by an institutional actor with authority that the venture and its related product or service meets a particular standard of quality. Such recognition offers objective and impartial validation of the venture's capabilities and provides symbolic conformation of the venture's survival potential (e.g., Sine et al., 2007; Zott & Huy, 2007). As such, investors and resource providers gain confidence in the entrepreneur's ability to deliver a fully operational and economically viable venture (e.g., Plummer, Allison, & Connelly, 2016; Sine et al., 2007).

In crowdfunding, interested backers often lack the technical knowledge and prior experience to fully assess and determine whether the reward is being promised and offered is

actually feasible (e.g., Ahlers et al., 2015; Frydrych et al., 2014). In such cases, visible endorsement by well-known and credentialed third-parties (e.g., media outlets, medical doctors) or certification from a central institution (e.g., governing body of an industry) offer positive signs regarding technical competency and venture quality (e.g., Dean & Biswas, 2001; Wakefield & Whitten, 2006). Third-parties are likely not going to stake their name and risk their reputation on poorly conceived ideas or on ventures they are not confident can deliver a quality product or service (Feng, Wang, & Peracchio, 2008). Such support provides backers a recognizable reference point from which they can start from when determining whether campaigns are truthful in their assertions and capable of delivering on their claims. As such, visual indication that the venture has received some formal third-party recognition from a known organization or governing body, such as the logo of a media outlet who has featured the product or an image signifying an industry award, can serve as viable cues that further establish the competence and expertise of the venture.

Taken together, visual cues that signify that the entrepreneur or new venture team has the required knowledge, skills, and ability to successfully deliver the product as promised can help establish needed credibility with backers. Thus, the extent to which expertise visual cues are present in crowdfunding campaigns will enhance how credible backers perceive the campaign to be and, subsequently, increase the likelihood the campaign will be funded.

Hypothesis 2a: Inclusion of expertise visual cues is positively related to the perceived credibility of crowdfunding campaigns.

Hypothesis 2b: Inclusion of expertise visual cues is positively related to crowdfunding performance.

Attractiveness

Attractiveness, as defined within the context of source credibility, refers primarily to how appealing an audience finds the source as well as the presentation of the message. It can refer to either how the message is delivered, such as with confidence and charisma in spoken communication, or the physical appeal of who or what is delivering the message (e.g., Ohanian, 1990; Patzer, 2012). Attractiveness can also relate to how clearly and explicitly information is communicated during an interaction. For example, websites that offer a simple, clean, and consistent presentation are considered more attractive and, thus, perceived to be more credible (Robins & Holmes, 2008).

Although researchers generally agree that expertise and trustworthiness are the two mandatory components of credibility (Metzger et al., 2003; Pornpitakpan, 2004), substantial evidence exists that perceptions of attractiveness and aesthetic beauty significantly affect how credible audiences find a message source (e.g., Anderson, Grunert, Katz, & Lovascio, 2010; Rifon, Jiang, & Kim, 2016; Robins & Holmes, 2008). Attractiveness is found to be particularly relevant in situations where nonverbal aspects of communication are an important aspect of message delivery. For example, an individual giving a speech on an unknown subject who is well-dressed and well-groomed is more likely to be seen as attractive and, therefore, as having the credibility to speak with authority on the subject than someone who is poorly dressed (e.g., Lightstone, Francis, & Kocum, 2011). Further, in web-based contexts similar to crowdfunding such as online shopping and ad campaigns, attractiveness has been consistently found to be a significant factor in how credible a website or advertisement was perceived to be (Robins & Holmes, 2008).

Attractiveness in entrepreneurship, as it relates to who is behind a new venture or the manner in which the venture is pitched, can have a significant effect in how potential investors consider new ventures. Even if the content of the pitch is otherwise the same, investors tend to be more persuaded by new venture proposals delivered by physically attractive, particularly male, entrepreneurs (Baron et al., 2006; Brooks et al., 2014). Similarly, the visual aesthetics of business plans such as use of appealing colors can also substantially influence how investors perceive new venture opportunities (e.g., Chan & Park, 2015). Across both contexts, physical attractiveness and aesthetic appeal create positive affective responses in investors that make the more inclined to respond favorably to subsequent information that is presented. Such responses and outcomes are consistent with broader psychological research that suggests humans are more likely to believe, and find more credible, information obtained from sources found visually attractive, even if countervailing objective information is available (e.g., Hoegg, Alba, & Dahl, 2010; Landwehr et al., 2011).

Applied to the crowdfunding context, it can therefore be expected that visual appeal of the campaign will influence backer funding consideration and decision making. Because attractiveness influences credibility perceptions in that it can affect how favorably individuals consider credibility indicators related to expertise and trustworthiness, how visually appealing the campaign is to potential backers likely is a determining factor in their credibility assessments. Specifically, the overall aesthetic of the campaign's webpage can influence how attractive potential backers find a crowdfunding campaign.

Aesthetics relates to the appreciation of beauty that can broadly include any visual experience that is pleasing or pleasurable (Dickie, 1997). Aesthetic judgments of an object occur almost instantaneously at first contact and dictate any subsequent interaction an observer may

have with an object. The more aesthetically appealing an object is, the greater the pleasure and positive affect towards the object an observer will have (Graf & Landwehr, 2015; Palmer, Schloss, & Sammartino, 2013). Such reactions shape whether individuals will further engage with an object and how they will interpret and process information used to make decisions. Thus, how individuals construct knowledge and apply meaning regarding an object, such as how credible they find the object to be, can be significantly influenced by the object's aesthetic appeal (e.g., Hansen, Ropo, & Sauer, 2007; Langer, 2009).

Development of credibility in an online context, such as crowdfunding, is as dependent on the aesthetic design and visual presentation of the website itself as it is on the information contained within (Fogg et al., 2003). Aesthetic judgments made by users within the first few seconds of visiting a page dictates whether the user will stay on the page and how they consider the information presented. Design elements such as poor layout, typographical errors, broken links, and unappealing use of color can all create negative aesthetic reactions that cause users to leave the page (e.g., Jiang, Wang, Tan, & Yu, 2016; Reinecke et al., 2013). Such issues also reflect a sense of amateurism that bring into question the credibility of the information presented (Metzger et al., 2003). Conversely, design elements such as a clean and simple organization, symmetrical layout, dynamic use of color, and visual variety (mix of images, graphics, text) all reflect a professional design that users find aesthetically appealing (Moshagen & Thielsch, 2010). Such characteristics make it easy to further process contained information and convey a sense of boldness and confidence in presentation needed to communicate credibility (e.g., Robins & Holmes, 2008).

Hypothesis 3a: Campaign visual attractiveness is positively related to the perceived credibility of crowdfunding campaigns.

Hypothesis 3b: Campaign visual attractiveness is positively related to crowdfunding performance.

Interaction Effects of Source Credibility Dimensions

Although trustworthiness visual cues, expertise visual cues, and campaign visual attractiveness can each directly affect how credible backers find crowdfunding campaigns and the likelihood the backer will ultimately contribute to the campaign, most crowdfunding campaigns likely include some combination of each dimension. If the more credible a source is perceived to be increases the likelihood of the desired outcome in the audience (Pornpitakpan, 2004), such as persuading backers to contribute to crowdfunding campaigns, it is likely that campaigns that include visual cues from multiple dimensions and are seen as attractive will be more successful than those campaigns high in only one. As such, it is important to consider how the dimensions together might influence perceptions of source credibility and subsequent funding outcomes.

Efforts to determine the relative effectiveness trustworthiness and expertise has on persuasiveness and attitude change has produced conflicting results. In a meta-analysis of the first 40 years of source credibility research, Wilson and Sherrell (1993) found that source expertise had the strongest influence on persuasion. Because expertise is typically more objective that the other dimensions, they argue that expertise is typically easier for audiences to readably assess and, therefore, easier to include in credibility judgments (Wilson & Sherrell, 1993). Conversely, more recent findings suggest that trustworthiness is the most important factor as trustworthy sources have been found to be more influential than untrustworthy ones, irrespective whether the source was seen as an expert or not (e.g., Guillory & Geraci, 2013; Pornpitakpan, 2004; Wang & Scheinbaum, 2018). Although debate remains regarding which credibility

dimension most contributes to source credibility perceptions, there exists a general consensus that sources seen as both trustworthy and an expert are overall perceived to be more credible than sources high in only one (e.g., Fogg et al., 2003; Metzger & Flanagin, 2013; Pornpitakpan, 2004).

Applied to entrepreneur credibility and crowdfunding performance, it can therefore be expected that the presence of visual cues related to both trustworthiness and expertise will have a stronger influence on funding likelihood than campaigns that do not. In particular, given the online nature of crowdfunding platforms, being able to quickly establish trust with potential backers likely affects how an entrepreneur's more objective skills and competencies are considered in funding decisions. Establishing trust is a critical aspect of both web-based engagements (e.g., Karimov et al., 2011; Lu et al., 2016; Metzger & Flanagin, 2013) and entrepreneurial funding raising efforts (e.g., Bammens & Collewaert, 2014; Maxwell & Lévesque, 2014; Welter, 2012) due the inherent uncertainty associated with both. Because trust relates to the belief that a source is honest, truthful, and forthcoming (McKnight et al., 2002), cues related to expertise may be evaluated more favorably when trust is high. Thus, while being seen as an expert is important with regards to overall credibility, being seen as trustworthy can further enhance and complement this relationship (e.g., Kuckertz et al., 2015).

Such a relationship has particular relevance to crowdfunding campaigns where backers often lack the technical background or experience to accurately assess whether claims and cues regarding the competencies and abilities of the entrepreneur are factually true (e.g., Ahlers et al., 2015). Accordingly, it is likely that the influence expertise visual cues has on perceived credibility of crowdfunding campaigns and crowdfunding performance is enhanced when trustworthiness visual cues are also present. As such, crowdfunding campaigns that include both

trustworthiness and expertise visual cues should be perceived as more credible and, subsequently, be more successful than campaigns that lack cues related to one or the other.

Hypothesis 4a: Inclusion of trustworthiness visual cues moderates the positive relationship between the inclusion of expertise visual cues and perceived credibility of crowdfunding campaigns such that the relationship is strengthened when trustworthiness visual cues are included.

Hypothesis 4b: Inclusion of trustworthiness visual cues moderates the positive relationship between the inclusion of expertise visual cues and crowdfunding performance such that the relationship is strengthened when trustworthiness visual cues are included.

In considering the three factors commonly identified as impacting source credibility, prior research generally finds trustworthiness and expertise to be the direct factors that affect source credibility with source attractiveness influence how credibility cues are transmitted to an audience (e.g., Metzger et al., 2003; Pornpitakpan, 2004; Robins & Holmes, 2008). For example, a reliable and qualified speaker who is dynamic and attractive will be viewed as more credible than a similarly reliable and qualified speaker who comes across as monotone and not considered physically attractive. Thus, while attractiveness itself can be an important factor in whether a source is seen as credible (e.g., Anderson et al., 2010; Rifon et al., 2016; Robins & Holmes, 2008), attractiveness also dictates how audiences interpret source attributes related to the other dimensions of source credibility.

An object's attractiveness, or lack thereof, frames how individual's process subsequent information and interactions with the object. If an object is found attractive, the positive affective response that results can lead to more cognitive interest paid to the object and more favorable consideration given to any related information that is presented (e.g., Graf & Landwehr, 2015;

Schaeffer, 2015). Conversely, the negative affective response generated by unattractive objects creates avoidance behaviors as individuals seek to minimize any additional contact or interaction with objects they find unappealing (Mehrabian & Russell, 1974). Therefore, as it relates to cues related to credibility, it is likely that the overall attractiveness of a source will affect both whether and how audiences consider informational cues related trustworthiness and expertise.

Applied to crowdfunding, that attractiveness may affect perceptions of trustworthiness and expertise is tied to the online context of crowdfunding interactions. In assessing credibility of web-based communication, design and look were cited most often by users (46.1% of respondents) as contributing the most to their credibility judgments (Fogg et al., 2001). Regardless of the quality of the information present, first impressions related to the overall attractiveness can create credibility perceptions that are hard to otherwise change (Robins & Holmes, 2008).

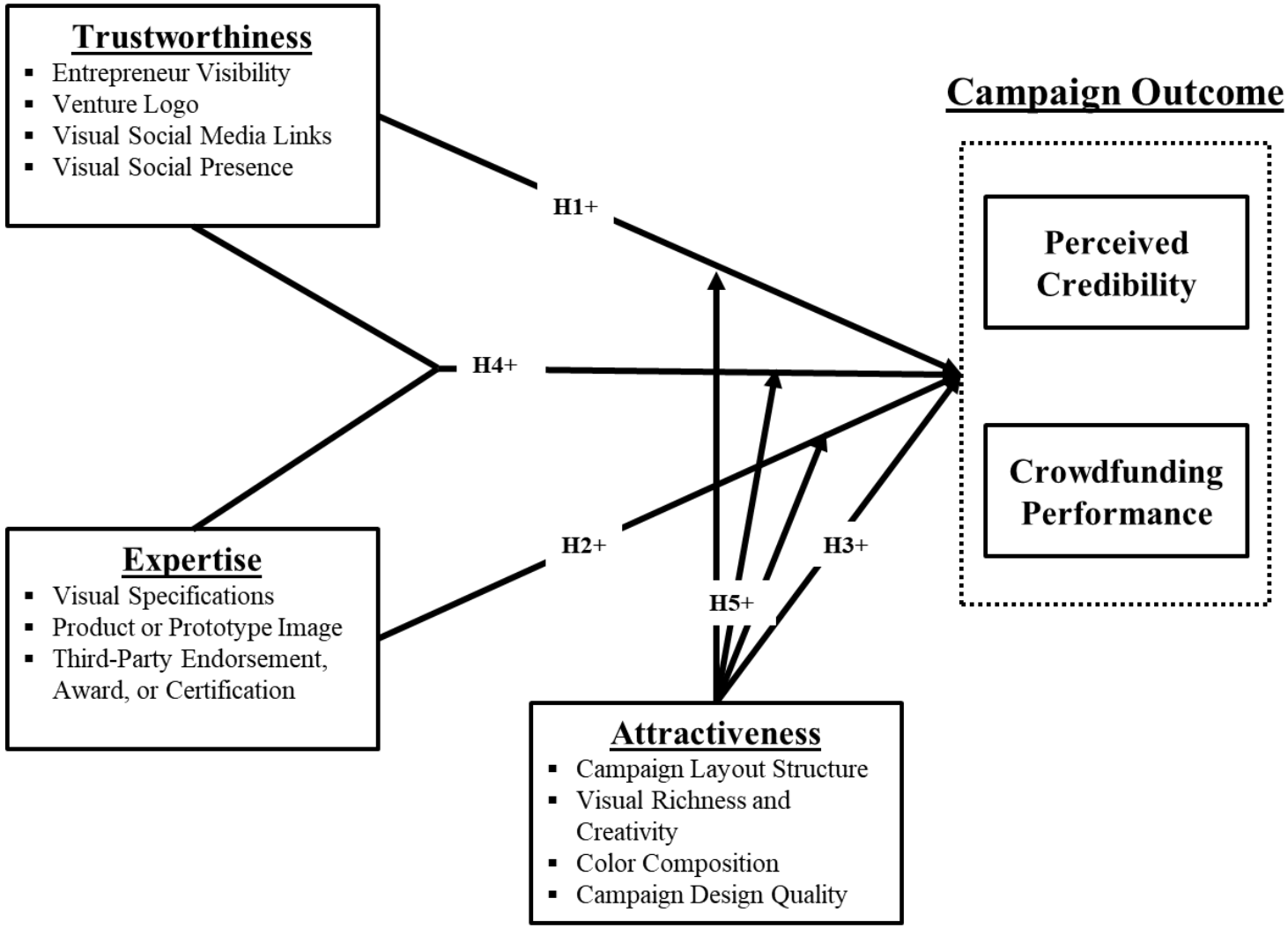
Because crowdfunding exists in an information-rich and dynamic environment, negative visceral judgments related to a campaign's aesthetic appeal may lead backers to quickly abandoning the campaign before taking the time to consider other visual cues related to credibility. On the other hand, positive first impressions related to attractiveness can stimulate further engagement with the campaign that allows backers the opportunity to find and further consider other visual cues related to credibility (e.g., Robins & Holmes, 2008; Tuch, Presslaber, Stöcklin, Opwis, & Bargas-Avila, 2012). As the web-based campaign is the conduit through which a crowdfunding pitch is delivered, and investors tend to be more favorable to new venture proposals delivered from attractive sources (e.g., Baron et al., 2006; Brooks et al., 2014), it is likely that crowdfunding backers will view visual cues that are attractive more favorably when assessing credibility. Thus, it can be expected that campaign attractiveness, as it relates to the

overall aesthetic appeal, will enhance the direct effect visual cues related to trustworthiness and expertise have on perceived credibility of crowdfunding campaigns and crowdfunding performance.

Hypothesis 5a: Campaign visual attractiveness moderates the positive relationship between the (a) inclusion of trustworthiness visual cues, (b) inclusion of expertise visual cues, (c) inclusion of both trustworthiness visual cues and expertise visual cues and perceived credibility of crowdfunding campaigns such that the relationship gets stronger as campaign visual attractiveness increases.

Hypothesis 5a: Campaign visual attractiveness moderates the positive relationship between the (a) inclusion of trustworthiness visual cues, (b) inclusion of expertise visual cues, (c) inclusion of both trustworthiness visual cues and expertise visual cues and crowdfunding performance such that the relationship gets stronger as campaign visual attractiveness increases.

Figure 1: Influence of Visual Source Credibility on Crowdfunding Outcomes



CHAPTER 3. METHOD

Sample

To test my hypotheses, I obtained web-scraped data (i.e., data systematically harvested from the internet) from 1000 Kickstarter campaigns. Kickstarter has awarded over $3.7 billion in total funding to over 147,000 projects from nearly 10 million unique investors with a reported success rate of roughly 36% (e.g., percentage of ventures who met stated funding goals)(Kickstarter, 2018). The final sample includes completed campaigns randomly culled from Kickstarter's Technology category. Campaigns within the Technology category generally consist of new products (e.g., apps, hardware, gadgets) that often serve as the genesis for new ventures, a process consistent with what would be expected in traditional entrepreneurial fundraising contexts rather than the one-off creative endeavors common of other Kickstarter categories such as film, dance, comics, or theatre (e.g., Li et al., 2017; Stanko & Henard, 2017).

Although prior studies have utilized crowdfunding data collected from a range of years dating back to the early stages of crowdfunding platforms (e.g., Anglin et al., 2018b; Johnson, Stevenson, & Letwin, 2018), crowdfunding campaigns have become increasingly more visual given the significant impact that the use of visual media, such as pictures and videos, has been found to have on funding success (e.g., Li et al., 2017; Mollick, 2014). Popular media outlets such as Forbes have also highlighted the importance of visual content in crowdfunding, releasing several articles in the recent years detailing why entrepreneurs should include visuals in their campaigns and encouraging them to do so (e.g., Bacon, 2019). Kickstarter now expects, rather than just encourages, that entrepreneurs will default to using various forms of visual media when designing campaigns ("Creator Questions," 2018). Accordingly, only campaigns launched during or after 2015 were included in the final sample. Utilizing a more recent sample of campaigns

allows for better isolation of the effects of each visual cue rather than potential confounding effects related to the simple presence or absence of any visual media that might arise from using older campaigns when such effects might be more pronounced (Mollick, 2014).

Dependent Variable

To measure funding outcomes, three different performance measures were utilized to capture the "multifaceted" nature of crowdfunding performance (Ahlers et al., 2015, p. 7). Prior crowdfunding research has operationalized crowdfunding performance in a number of ways to capture the magnitude and scope of crowdfunding performance, and to account for the nuanced differences between various crowdfunding platforms (e.g., Allison et al., 2015; Calic & Mosakowski, 2016; Parhankangas & Renko, 2017). Accordingly, I followed recent crowdfunding research best practices that have started to include multiple measures of performance to improve the comprehensiveness of their analysis and potential generalizability of results (e.g., Anglin et al., 2018b).

The first performance measure is *funding success*. Funds are awarded on Kickstarter only if the full funding goal set at the start of the campaign is met (entrepreneurs receive nothing if the funding goal is not met and money is returned to backers; Mollick, 2014). To identify if campaigns were successful in meeting their funding goals, campaigns where the funding goal was met were coded as '1' and campaigns where the funding goal was not met were coded as '0' (Kuppuswamy & Bayus, 2015).

The second performance measure is *total amount raised* that captures the total amount of funding raised during the campaign irrespective of whether the funding goal was met. Use of this continuous measure to capture crowdfunding performance has several merits. Though Kickstarter only awards funding if the funding goals was fully met, other crowdfunding

platforms do not have such a requirement and award entrepreneurs whatever funds they are able to raise (e.g., Indiegogo, 2018). As such, capturing performance as total amount raised allows for greater generalizability across platforms. Additionally, while the funding goal on Kickstarter establishes a minimum that must be raised, Kickstarter and other crowdfunding platforms do not cap the total amount of funds that can be raised. Therefore, this measure allows for differentiation among campaigns that barely met their funding goals and those that raised an exponential amount above their goal (e.g., Anglin et al., 2018b). Finally, this measure enables comparisons to non-crowdfunding focused entrepreneurial financing research that use funds raised as the dependent variable (e.g., Ahlers et al., 2015).

The third performance measure is *total backers* that captures the total number of individuals that contributed to the campaign. Crowdfunding success, regardless of the platform, is often dependent on being able to convince a high number of individuals to contribute to the campaign given the often small amount of each investment (Skirnevskiy, Bendig, & Brettel, 2017). Thus, attracting a large number of backers can be indicative of how credible a particular crowdfunding campaign comes across to a broad audience.

Independent Variables

Independent variables related to trustworthiness (H1) and expertise (H2) were collected through a manual coding of the crowdfunding campaigns.

Trustworthiness Four separate visual cues that prior research suggests increase perceptions of source trustworthiness were collected. *Entrepreneur visibility* was coded as '1' if visible pictures of any or all of the entrepreneurs behind the campaign were included within the context of the campaign and '0' if the entrepreneur(s) were not pictured. The *Logo* variable was coded as '1' if the campaign included a graphic logo as part of its branding, defined as a graphic

mark, emblem, or symbol beyond plain text used to aid in the public identification and recognition of a product, service, or venture (Henderson & Cote, 1998), and '0' if no logo was present. *Social media profile* was coded as '1' if the campaign included a link to the venture or product's social media account as a visual graphic of the social media platform (e.g., Facebook, Twitter, Instagram) and '0' if only a text hyperlink, the entrepreneur's personal account, or no links were present. *Social presence* was coded as '1' if the campaign included images where humans were fully visible using or demonstrating the product being offered or were shown engaged in the service being presented and '0' if no human presence were utilized in campaign images. After each variable was coded, an overall *Trustworthiness* score was calculated as the total sum across all variables.

To ensure data coding remained theoretically and systematically consistent, a subset of 250 campaigns were coded by a second, independent coder to ensure reliability of the coding schema (Hallgren, 2012). Observed reliabilities of 0.97 for entrepreneur visibility, 0.90 for logo, 0.97 for social media profile, and 0.92 for social presence between the two coders all came in above the 0.80 threshold generally indicative of high reliability (Ellis, 1994).

Expertise. Three separate visual cues that prior research suggest increase perceptions of source expertise were collected. S*pecifications* was coded as '1' if the campaign included visual explanations of the project that provide technical details on more than one component of the product using any type of visual representation including graphics, drawings, computer renderings, or pictures and '0' if no specifications were present. *Prototype or product* was coded as '1' if the campaign included pictures of the product or a prototype and '0' if the campaign only offered a drawing, sketch, or computer rendering of the product or if no picture of the project in any stage of physical assembly was present. *Third-party endorsement* was coded as a

continuous variable depending on the number of logos of groups and organizations (e.g., media outlets, accrediting bodies) provided in support of the venture as well as any awards or other certifications given to the venture that was signified by a visual graphic or symbol beyond simple text. After each variable was coded, an overall *Expertise* score was calculated as the total sum across all variables.

To ensure data coding remained theoretically and systematically consistent, a subset of 250 campaigns were coded by a second, independent coder to ensure reliability of the coding schema (Hallgren, 2012). Observed reliabilities of 0.84 for product or prototype image, 0.90 for specifications, and 0.99 for third-party endorsement between the two coders all came in above the 0.80 threshold generally indicative of high reliability (Ellis, 1994).

Attractiveness To capture *aesthetic appeal*, I followed prior research on website attractiveness given the web-based nature of crowdfunding campaigns. Visual design elements and aesthetic qualities such as color, graphics, and layout of a website can influence how attractive and how much pleasure users derive when visiting the site (e.g., Jiang et al., 2016; Lavie & Tractinsky, 2004). Research exploring the overall aesthetic appeal of a website follow a gestalt perspective, considering the website as a singular object made up of individual elements (e.g., pictures, texts, menus). The attractiveness of a website, therefore, is the result of user aesthetic judgments based on the overall structure, color, and layout of the website as a whole rather than separate aesthetic judgments of each individual visual element (Moshagen & Thielsch, 2010). For example, symmetry and balance are key factors that influence aesthetic judgments (Tuch, Bargas-Avila, & Opwis, 2010). Aesthetic appraisal of a website would consider the how symmetrical the layout of the website is (degree to which various components are equal reflections or exactly similar when facing each other across or around an axis; Osborne,

1986) rather than how symmetrical each individual visual element is. Therefore, assessments of the aesthetic appeal will be based on how all of the visual elements together create an overall aesthetic rather than consider only specific visual elements in isolation.

Coding was done via Amazon mTurk. The mTurk platform has been used as a valuable source for collecting data based on subjective evaluations of visual media and stimuli including ratings of aesthetic appeal (e.g., O'Donovan, Agarwala, & Hertzmann, 2014; Redi et al., 2013). Research finds that what individuals deem attractive, or not attractive, remains fairly consistent across various cultures and backgrounds (Langlois et al., 2000), indicating that attractiveness can be measured objectively based on specific factors and characteristics. However, level of attractiveness can be subjective to the observer and may vary from person to person based on attitudes or preferences (Palmer et al., 2013), necessitating multiple assessments of aesthetic appeal from different individuals to create an overall objective composite score. As such, a minimum of three independent assessments of aesthetic appeal for each campaign were captured. Capturing at least three scores for a subjective variable of interest in crowdfunding research is consistent current best practices (e.g., Li et al., 2017; Scheaf et al., 2018), offering sufficient data points form which conclusions can be drawn.

Coders assessed the aesthetic appeal using the Short Visual Aesthetics of Website Inventory (VisAWI-S) tool developed and validated by Moshagen and Thielsch (2013). Designed to capture the overall aesthetic appeal of websites, the VisAWI-S is a modified version of the full VisAWI scale that measures the four interrelated facets of visual aesthetic: simplicity, diversity, colorfulness, and craftsmanship (Moshagen & Thielsch, 2010). The VisAWI-S is a 4-item scale designed to capture a brief assessment of a single dimension of perceived visual aesthetic and provides a valid approximation of the full-length 18-item version (Moshagen &

Thielsch, 2013). Using the modified scale also addressed potential issues with coder fatigue by offering a shorter assessment of visual aesthetics compared to the full-length version. The VisAWI-S presents four statements regarding the design features of the campaign from which coders indicated their level of agreement on a seven-point Likert-type scale ranging from 1 (Disagree) to 7 (Agree). Table 1 presents the scale items used.

Table 1: Items of the VisAWI-S

Item	Disagree						Agree
Visually, everything goes together in this campaign.	1	2	3	4	5	6	7
Visually, the layout is pleasantly varied.	1	2	3	4	5	6	7
Visually, the color composition is attractive.	1	2	3	4	5	6	7
Visually, the layout appears professionally designed.	1	2	3	4	5	6	7

In the assessment survey, coders were randomly assigned a single campaign from the Kickstarter sample. Coders were given brief instructions regarding the task and how to assess each variable being measured. Qualtrics and the equal distribution randomization function were used for collection to ensure each campaign received equal assessment. The overall aesthetic score from each coder will be averaged together to create a composite aesthetic score for each campaign.

Controls

Several controls were included to account for previously established antecedents of crowdfunding performance. First, I controlled for several characteristics found to be indicative of campaign or venture quality. Specifically, I consider the inclusion of a *video* (video = 1; no video = 0), whether the campaign was identified as a *staff pick* (yes=1, no=0), total number of *campaign visuals*, total *word length* of the campaign as longer narratives take up more space on screen and may crowd out visual cues, number of *project updates* from the entrepreneur(s), and use of *numerical terms* captured through computer-aided text analysis using the DICTION software program as such language can be indicative of specific, objective data rather than

abstract goals (e.g., Anglin et al., 2018b; Courtney et al., 2017; Davis et al., 2017; Mollick, 2014; Parhankangas & Renko, 2017).

Next, I controlled for various structural aspects of the campaign that can influence crowdfunding success (e.g., Mollick, 2014). *Funding goal* was measured by the amount of funds requested by the campaign as larger funding goals are harder to obtain than smaller ones (Allison et al., 2015; Davis et al., 2017). Campaign *duration* was measured as the total number of days the campaign was active given that longer durations can have a negative effect on funding outcomes (Mollick, 2014). Because Kickstarter is a reward-based platform that uses rewards to entice investments, I controlled for *rewards levels* which will be measured by the number of rewards offered in the campaign (e.g., Frydrych et al., 2014; Mollick, 2014). Because my sample includes projects from several years, 2015-2019, dummy variables for each *year* were created to account for the increasing nuance and sophistication in use of visual content in crowdfunding from year to year (e.g., Bacon, 2019).

Finally, I accounted for entrepreneurs' human capital given that homophily (Harrison & Mason, 2007) and cultural bias (e.g., Anglin et al., 2018b; Younkin & Kuppuswamy, 2017) has been shown to influence entrepreneurs' ability to raise funds. Specifically, I controlled for entrepreneur *education level* (lead entrepreneur with a master's degree or above = 1; no advanced degree = 0), whether the entrepreneur had prior *entrepreneurial experience* (experience = 1; no experience = 0), and entrepreneur *sex* (male = 1; female = 0)(e.g., Ahlers et al., 2015; Anglin et al., 2018a; Davis et al., 2017).

Sex was coded a number of ways following current crowdfunding research best practices. First, a visual analysis of the campaign/creator profile was conducted to determine if any visual pictures of the entrepreneur/new venture team were present where apparent sex could be

readably identified (Greenberg & Mollick, 2017). Second, if no pictures were available or provided, the name and profile description of who created the profile were considered. If the name would more often than not reflect one sex (e.g., Robert, Elizabeth) or the profile used gender-specific pronouns (e.g., he, she) in describing the entrepreneur, sex was coded as '1' for males and '0' for females (e.g., Johnson et al., 2018; Mohammadi & Shafi, 2018). If ambiguity remained, any personal social media profiles or personal websites included in the creator profile were then assessed. For campaigns launched by a team of both male and females, the campaign was coded as '1' for males and '0' for females unless the campaign was clearly created by a female or a female was clearly identified as the one in charge of the campaign.

Statistical Analysis

Two different statistical techniques were used to estimate my models. Because both *total amount raised* and *total backers* measures are continuous, I used generalized linear modeling (GLM). Use of GLM, a generalization of liner regression, allows for dependent variables that have an error distribution other than a normal distribution and, thus, are estimated using maximum likelihood (McCullagh, 2018). Error distributions were analyzed for non-normality and, where applicable, changes to the model were made if error distributions were non-normal. For the model using the dichotomous *funding success* dependent variable, I used logistic regression. Both statistical techniques are commonly used in crowdfunding research (e.g., Anglin et al., 2018b; Courtney et al., 2017).

Testing Hypotheses in Experiential Setting

After conducting my initial analysis, further examination of the theoretical mechanisms underlying my hypothesized relationships were conducted in an experimental setting. In the experiment, manipulations were developed for each of the identified visual cues using existing

crowdfunding campaigns. Experimental design and manipulation has been utilized in a number of prior crowdfunding studies (e.g., Anglin et al., 2018b; Oo, Allison, Sahaym, & Juasrikul, 2018) as well as other research exploring the how visual elements influence behaviors related to website interaction (e.g., Jiang et al., 2016; Seckler, Opwis, & Tuch, 2015; Skulmowski et al., 2016) and consumer purchasing decisions (e.g., Hoegg et al., 2010; Sonderegger & Sauer, 2010).

Sample

To capture a representative sample of individuals likely to invest in crowdfunding campaigns, I administered my experimental survey via Amazon mTurk with the stipulation that participants must have previously contributed to a crowdfunding campaign and currently reside in the United States. The mTurk platform has been used as a valuable source of survey and experimental data in prior management and entrepreneurship research (e.g., Lu et al., 2017; Welsh & Ordóñez, 2014; Yam, Klotz, He, & Reynolds, 2017), specifically in studies exploring aspects of crowdfunding performance (e.g., Allison et al., 2017; Anglin et al., 2018b). Recent work has demonstrated that properly-designed experiments and surveys conducted with mTurk participants produce psychometric standards consistent with other methods and prior studies (e.g., Buhrmester, Kwang, & Gosling, 2011; Welsh & Ordóñez, 2014). Because this will be a one-time experiment, potential threat to validity from repeated participation is avoided (Landers & Behrend, 2015).

Following prior crowdfunding research best practices using mTurk, I employed several screening devices including timers, directed answer, and content checks to ensure the validity of the responses (e.g., Huang, Curran, Keeney, Poposki, & DeShon, 2012; Meade & Craig, 2012). Prior research using experimental manipulations to assess how the presence of various factors affect perceptions of source credibility find that small (Cohen's $d = 0.30$) to medium (Cohen's d

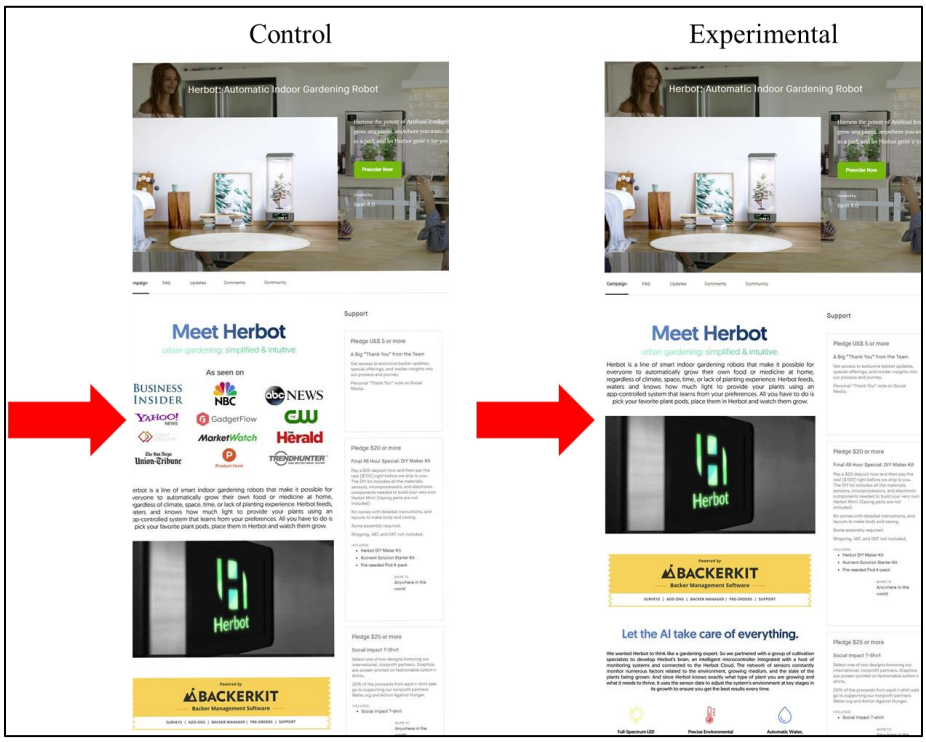
= 0.40) effect sizes can be expected between stimuli manipulated to have either low credibility or high expected credibility (e.g., Lowry et al., 2014). Anticipating that similar effect sizes will exist in my experiment, a power analysis where $\alpha = 0.05$ and $\beta = 0.80$ suggested that a total sample of 352 respondents (176 in each group) for each variable manipulation is needed to achieve result significance needed to confirm the proposed relationships assuming a small effect size (Cohen's $d = 0.30$). Accordingly, I solicited participation from 3012 individuals who were each paid $0.25 for successfully completing the survey.

Experimental Design

To test how the presence of specific visual cues influence credibility assessments, eight Kickstarter campaigns were chosen based on the prominence and inclusion of one of the eight visual cues being test. For example, a crowdfunding campaign that included several images of humans using and riding the motorized scooter being pitched was selected as representative of a campaign high in social presence visual cues. Each campaign was captured in its entirety using a full-page screenshot. Two different versions of each campaign were used in the final experiment. One version was used as a control, presented to participants unaltered from how the campaign appears on Kickstarter. The second version was manipulated by the complete removal of only the specific visual cue being tested. All other visual and narrative content remained unchanged from the original campaign. Thus, the only difference between the two versions of each campaign was either the presence or absence of the visual cue of interest. For example, the campaign chosen to test the influence of including third-party endorsements on credibility perceptions had the visual endorsements removed from the campaign for the experimental group. Screenshots were manipulated using Adobe Photoshop according to the levels of each objective

design factor (e.g., Seckler et al., 2015; Tuch et al., 2010; Tuch et al., 2012). Figure 2 provides an example of the experimental design used to examine third-party endorsement.

Figure 2: Experimental Manipulation of Third-Party Endorsement Variable



Procedure

After providing informed consent and answering screener and demographic questions, each participant was asked to rate one campaign selected at random from the 16 possible treatments. Having participants assess just one campaign rather than multiple campaigns for each variable eliminated the need to account for within-person differences during analysis. A series of instruments, including timers and countdown clocks, was used to monitor the experiment and help participants stay on task (Allison et al., 2017). To ensure data quality, respondents who incorrectly answered attention check questions had the survey terminated immediately, were not eligible for compensation, and had their responses eliminated from the final sample.

Participants were asked to rate the campaign several ways. First, were provided the definition of specific credibility dimension related to the campaign as well as the definition of credibility used in this dissertation. Next, participants were asked to rate the extent to which they either believe that the campaign's claims can be trusted, perceive that the entrepreneur or new venture team have the required expertise to successfully produce and deliver what is being proposed, or they find the campaign visually appealing based on which visual cue that particular campaign was associated with (e.g., logo, prototype). Ratings were captured as a single-item measure using a seven-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Participants only rated their perceptions of the dimension of source credibility linked to the visual cue being isolated. For example, campaigns designed to test whether the presence of a logo influences backer perceptions of trustworthiness did not include questions related to expertise or attractiveness. Next, all participants, regardless of the campaign they are assessing, were asked to rate how credible they find the overall campaign to be using seven-point Likert-type scale ranging from 1 (Not Credible) to 7 (Highly Credible).

Finally, to determine whether the presence or absence of the visual cue influenced funding decisions, participants were asked whether they would back the campaign using a seven-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)(e.g., Allison et al., 2017).

Statistical Technique

To test where the inclusion of specific visual elements significantly influences perception of credibility in crowdfunding campaigns, I conducted a set of independent t-tests for each scenario to determine whether the inclusion of the targeted visual cue significantly influences how backers perceive the campaign. Doing so allowed me to compare the means of the control

group and the experimental group of each manipulation to determine if they are statistically different from each other (Kerlinger & Lee, 2000). Further, I was able to determine if the presence of each visual cue has a significant influence on credibility assessments. Another series of t-tests was conducted to determine whether the inclusion of each visual cue significantly influences investment likelihood.

CHAPTER 4: RESULTS

Table 2 provides the descriptive statistics and Table 3 provides the correlations for my sample. Correlations between binary variables are shown as point biserial correlation coefficients. The 1000 Kickstarter campaigns randomly sampled had an overall funding success rate of 26%. On average, campaigns utilized roughly eight visual elements with each campaign including at least one visual element. Regarding the specific visual elements that were the primary focus of this study, 580 campaigns included a logo, 80 campaigns included a visual link to social media profile(s), 170 campaigns included visual social presence, 220 campaigns included visual product specifications, 560 campaigns included a product or prototype image(s), and 150 campaigns included some form of visual third-party endorsement, award, or certification.

Tables 4, 5, and 6 provide the results of my hypothesis tests for *total amount raised*, *total backers*, and *funding success* respectively. Hypothesis 1 predicted that inclusion of trustworthiness visual cues within the campaign will have a positive relationship with crowdfunding performance. The coefficients for total amounts raised ($\beta = 0.366$; $p < 0.01$), total backers ($\beta = 0.297$; $p < 0.01$), and funding success ($\beta = 2.894$; $p < 0.01$) were each positive and significant, providing support for Hypothesis 1. These results indicate that including trustworthiness visual cues would be associated with an approximate 37% increase in the amount of funds raised, an approximate 30% increase in the number of total backers, and an approximate 290% increase in the probability of being successfully funded. Evaluating these effects at sample means of the dependent variables (total amount raised = $31,655.16; total backers = 199.42; funding success = 0.26), trustworthiness visual cues would be associated with an additional

$11,585.79 raised, an additional 59 individuals who choose to back the project, and a change in success rate from 26% to a near perfect 100%.

Hypothesis 2 predicted that inclusion of expertise visual cues within the campaign will have a positive relationship with crowdfunding performance. The coefficients for total amounts raised ($\beta = 0.032$; $p < 0.01$) and total backers ($\beta = 0.023$; $p < 0.01$) were each positive and significant, however funding success ($\beta = 1.058$; $p = 0.066$) was positive but not significant, providing mixed evidence for Hypothesis 2. These results indicate that including expertise visual cues would be associated with an approximate 3.1% increase in the amount of funds raised and an approximate 2.3% increase in the number of total backers. Evaluating these effects at sample means of the dependent variables (total amount raised = $31,655.16; total backers = 199.42), expertise visual cues would be associated with an additional $1,012.97 raised and an additional 5 individuals who choose to back the project.

Hypothesis 3 predicted campaign visual attractiveness will have a positive relationship with crowdfunding performance. The coefficients for total amounts raised ($\beta = 0.511$; $p < 0.01$), total backers ($\beta = 0.365$; $p < 0.01$), and funding success ($\beta = 2.466$; $p < 0.01$) were each positive and significant, providing support for Hypothesis 3. These results indicate that campaign visual attractiveness may lead to an approximate 51% increase in the amount of funds raised, an approximate 37% increase in the number of total backers, and an approximate 247% increase in the probability of being successfully funded. Evaluating these effects at sample means of the dependent variables (total amount raised = $31,655.16; total backers = 199.42; funding success = 0.26), campaign visual attractiveness may lead to an additional $16,175.79 raised, an additional 73 individuals who choose to back the project, and a change in success rate from 26% to 89%.

Hypothesis 4 predicted that inclusion of trustworthiness visual cues within the campaign will moderate the positive relationship between the inclusion of expertise visual cues and crowdfunding performance such that the relationship will be strengthened when trustworthiness visual cues are included. None of the moderating terms for any of the performance variables were positive and significant, thus Hypothesis 4 was not supported. However, the moderating terms for total amount raised (β= -0.044; $p < 0.01$; Figure 3A provides plots of this relationship) and total backers (β= -0.043; $p < 0.01$; Figure 3B provides plots of this relationship) demonstrated a significant relationship, albeit negative. Examining the plots of these relationships suggests that rather than providing a positive moderating effect, the presence or relative absence of trustworthiness visual cues has little impact on how expertise visual cues influence the total amount raised. As it relates to total backers, trustworthiness and expertise visual cues appear to create a substitution effect that suggests campaigns high in either one or the other provides enough information that backers need to make their decisions. The theoretical and practical implications of these results are explored further in the discussion.

Hypothesis 5 predicted that campaign visual attractiveness would positively moderate the relationship between credibility visual cues and crowdfunding performance. None of the moderating terms for any of the moderating terms were both positive and significant, thus Hypothesis 5 was not supported.

Table 2: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Funding Success	0.26	0.44	0.00	1.00
Total Backers	199.42	755.46	0.00	10,474.00
Total Amount Raised	31,655.16	137,597.80	0.00	1,877,719.00
Funding Goal	84,253.58	834,869.40	1000.00	25,000,000.00
Staff Pick	0.08	0.27	0.00	1.00
Video	0.78	0.41	0.00	1.00
Rewards Levels	6.44	4.28	0.00	26.00
Project Updates	4.94	9.49	0.00	131.00
User Comments	88.63	545.05	0.00	12,841.00
Numerical Terms	34.44	23.81	9.00	268.00
Total Words	881.24	592.38	175.00	4,891.00
Campaign Visuals	8.74	7.14	1.00	54.00
Duration	35.43	11.63	5.00	60.00
Entrepreneur Education	0.08	0.27	0.00	1.00
Entrepreneur Experience	0.32	0.46	0.00	1.00
Entrepreneur Sex	0.88	0.32	0.00	1.00
Trustworthiness	1.03	1.05	0.00	4.00
Expertise	2.60	6.96	0.00	95.00
Attractiveness	4.60	1.07	1.00	7.00

Table 3: Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Funding Success	1.000																		
2	Total Backers	0.401*	1.000																	
3	Total Amount Raised	0.362*	0.794*	1.000																
4	Funding Goal	-0.041	-0.007	0.001	1.000															
5	Staff Pick	0.400*	0.316*	0.373*	-0.013	1.000														
6	Video	0.247*	0.130*	0.118*	-0.065*	0.148*	1.000													
7	Rewards Levels	0.411*	0.286*	0.231*	-0.051	0.274*	0.385*	1.000												
8	Project Updates	0.665*	0.487*	0.464*	-0.025	0.379*	0.230*	0.426*	1.000											
9	User Comments	0.271*	0.661*	0.755*	0.004	0.257*	0.084*	0.206*	0.452*	1.000										
10	Campaign Visuals	0.175*	0.127*	0.187*	0.003	0.093*	0.175*	0.295*	0.299*	0.181*	1.000									
11	Total Words	0.269*	0.218*	0.259*	0.012	0.192*	0.268*	0.402*	0.341*	0.204*	0.734*	1.000								
12	Campaign Visuals	0.346*	0.337*	0.365*	-0.011	0.213*	0.231*	0.400*	0.385*	0.282*	0.272*	0.381*	1.000							
13	Duration	0.025	0.057	0.075*	0.028	0.007	0.044	0.021	0.028	0.044	0.026	0.044	0.085*	1.000						
14	Entrepreneur Education	0.000	0.016	0.048	-0.015	0.008	0.035	0.008	0.040	0.081*	0.078*	0.071*	0.009	0.056	1.000					
15	Entrepreneur Experience	0.040	0.015	0.020	-0.015	0.048	0.137*	0.119*	0.103*	0.004	0.111*	0.181*	0.086*	-0.005	0.188*	1.000				
16	Entrepreneur Sex	0.054	0.061	0.063*	0.021	0.054	-0.006	0.017	0.058	0.052	0.029	0.027	0.026	0.022	-0.043	0.030	1.000			
17	Trustworthiness	0.497*	0.347*	0.349*	-0.047	0.333*	0.334*	0.482*	0.432*	0.248*	0.206*	0.384*	0.601*	0.068*	0.034	0.149*	0.008	1.000		
18	Expertise	0.383*	0.434*	0.413*	-0.018	0.230*	0.180*	0.330*	0.470*	0.200*	0.195*	0.263*	0.499*	0.112*	0.039	0.087*	0.068*	0.458*	1.000	
19	Attractiveness	0.359*	0.224*	0.212*	-0.055	0.190*	0.325*	0.394*	0.284*	0.137*	0.138*	0.229*	0.347*	0.074*	0.050	0.104*	-0.001	0.469*	0.257*	1.000

Table 4: Total Amount Raised Results

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Funding Goal	0.000**	0.000	0.000**	0.000	0.000**	0.000	0.000**	0.000	0.000**	0.000	0.000**	0.000	0.000**	0.000	0.000**	0.000
Staff Pick	0.779**	0.167	0.587**	0.169	0.769	0.769	0.837**	0.174	0.746**	0.162	0.779**	0.176	0.724**	0.173	0.799**	0.171
Video	1.591**	0.194	1.488**	0.195	1.594	1.594	1.441**	0.189	1.410**	0.198	1.429**	0.190	1.407**	0.193	1.323**	0.197
Rewards Levels	0.168**	0.021	0.150**	0.022	0.164	0.164	0.138**	0.020	0.136**	0.022	0.131**	0.020	0.128**	0.022	0.116**	0.022
Project Updates	0.143**	0.013	0.136**	0.013	0.135	0.135	0.133**	0.012	0.128**	0.013	0.127**	0.012	0.128**	0.012	0.123**	0.012
User Comments	0.000*	0.000	0.000**	0.000	0.000**	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000
Numerical Terms	-0.003	0.003	0.000	0.003	-0.002**	-0.002	-0.002	0.003	-0.002	0.003	-0.001	0.003	0.000	0.003	-0.001	0.003
Total Words	0.000	0.000	0.000	0.000	0.000**	0.000	0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000*	0.000
Campaign Visuals	0.050**	0.009	0.029**	0.009	0.042*	0.042	0.039**	0.008	0.026*	0.010	0.031**	0.009	0.030**	0.010	0.023*	0.011
Duration	0.002	0.005	0.003	0.005	0.001**	0.001	0.002	0.005	0.001	0.005	0.002	0.005	0.002	0.005	0.001	0.005
Entrepreneur Education	-0.251	0.220	-0.269	0.218	-0.258**	-0.258	-0.363	0.213	-0.318	0.222	-0.377	0.211	-0.370	0.208	-0.411	0.211
Entrepreneur Experience	-0.007	0.134	-0.011	0.136	0.019*	0.019	0.070	0.138	0.068	0.137	0.086	0.140	0.070	0.142	0.133	0.144
Trustworthiness			0.366**	0.076					0.451**	0.078			0.361	0.297	0.104	0.351
Expertise					0.032*	0.032			0.128**	0.020	0.110*	0.050			0.346	0.211
Attractiveness							0.511**	0.064			0.522**	0.071	0.480**	0.088	0.428**	0.098
Trustworthiness*Expertise									-0.044**	0.006					-0.082	0.073
Expertise*Attractiveness											-0.015	0.008			-0.041	0.036
Trustworthiness*Attractiveness													-0.031	0.056	0.036	0.067
Expertise*Trustworthiness*Attractiveness															0.008	0.013
Constant	4.151**	0.320	4.107**	0.310	4.313**	0.321	2.085**	0.371	4.235**	0.312	2.174**	0.384	2.193**	0.443	2.529**	0.479
Log-likelihood	-8960.138		-8920.1289		-8942.8352		-8856.7399		-8878.7995		-8845.0341		-8844.5118		-8815.963	
N	1000		1000		1000		1000		1000		1000		1000		1000	

* p < 0.05; ** p < 0.01

Table 5: Total Backers Results

	Model 9		Model 10		Model 11		Model 12		Model 13		Model 14		Model 15		Model 16	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Funding Goal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Staff Pick	0.596**	0.194	0.468*	0.205	0.602**	0.191	0.611**	0.192	0.586**	0.198	0.598**	0.193	0.534**	0.205	0.606**	0.197
Video	0.979**	0.166	0.905**	0.164	0.984**	0.167	0.859**	0.167	0.853**	0.165	0.863**	0.169	0.822**	0.167	0.777**	0.168
Rewards Levels	0.161**	0.018	0.144**	0.020	0.159**	0.018	0.131**	0.018	0.133**	0.020	0.129**	0.018	0.120**	0.020	0.112**	0.020
Project Updates	0.134**	0.012	0.128**	0.011	0.130**	0.012	0.127**	0.011	0.126**	0.011	0.124**	0.011	0.123**	0.011	0.122**	0.011
User Comments	0.001	0.000	0.000*	0.000	0.000*	0.000	0.001	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000	0.000*	0.000
Numerical Terms	-0.006*	0.003	-0.003	0.003	-0.006	0.003	-0.005	0.003	-0.003	0.003	-0.004	0.003	-0.002	0.003	-0.003	0.003
Total Words	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Campaign Visuals	0.041**	0.009	0.025*	0.010	0.036**	0.009	0.034**	0.008	0.022*	0.010	0.029**	0.009	0.026*	0.010	0.022*	0.011
Duration	0.003	0.006	0.003	0.006	0.002	0.006	0.001	0.005	0.002	0.006	0.001	0.005	0.001	0.005	0.000	0.005
Entrepreneur Education	-0.159	0.174	-0.143	0.181	-0.156	0.175	-0.227	0.177	-0.195	0.179	-0.227	0.176	-0.226	0.174	-0.266	0.172
Entrepreneur Experience	-0.155	0.113	-0.154	0.118	-0.131	0.112	-0.127	0.116	-0.074	0.118	-0.110	0.116	-0.125	0.120	-0.058	0.120
Trustworthiness			0.297**	0.072					0.383**	0.072			0.443	0.285	0.412	0.313
Expertise					0.023**	0.008			0.118**	0.016	0.038	0.049			0.167	0.239
Attractiveness							0.365**	0.056			0.358**	0.060	0.351**	0.079	0.305**	0.079
Trustworthiness*Expertise									-0.043**	0.005					-0.039	0.085
Expertise*Attractiveness											-0.003	0.008			-0.009	0.041
Trustworthiness*Attractiveness													-0.048	0.053	-0.024	0.059
Expertise*Trustworthiness*Attractiveness															0.000	0.015
Constant	0.334	0.274	0.346	0.277	0.455	0.275	-0.942**	0.345	0.423	0.280	-0.822*	0.355	-0.894*	0.423	-0.656	0.438
Log-likelihood	-4451.850		-4424.38421		-4440.173172		-4401.715013		-4384.14713		-4393.881381		-4387.953961		-4356.900758	
N	1000		1000		1000		1000		1000		1000		1000		1000	

* p < 0.05; ** p < 0.01

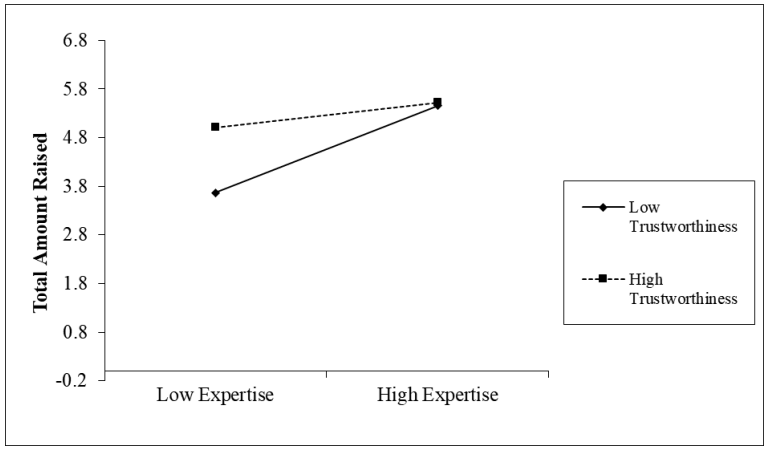
Table 6: Funding Success Results

	Model 17		Model 18		Model 19		Model 20		Model 21		Model 22		Model 23		Model 24	
	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.	Odds Ratio	S.E.
Funding Goal	1.000**	0.000	1.000**	0.000	1.000**	0.000	1.000**	0.000	1.000**	0.000	1.000**	0.000	1.000**	0.000	1.000**	0.000
Staff Pick	5.065	4.317	3.618	3.198	4.990	4.416	4.995	4.185	3.488	3.189	4.834	4.239	3.459	2.952	3.380	3.096
Video	1.780	0.694	1.520	0.629	1.780	0.698	1.322	0.545	1.513	0.629	1.314	0.547	1.220	0.524	1.342	0.588
Rewards Levels	1.177**	0.055	1.150**	0.059	1.173**	0.056	1.149**	0.060	1.145*	0.061	1.146*	0.061	1.133*	0.063	1.124*	0.063
Project Updates	1.643**	0.131	1.616**	0.137	1.636**	0.132	1.648**	0.138	1.611**	0.137	1.641**	0.139	1.624**	0.141	1.613**	0.142
User Comments	1.059**	0.011	1.062**	0.013	1.060**	0.011	1.058**	0.011	1.061**	0.013	1.058**	0.012	1.057**	0.013	1.063**	0.016
Numerical Terms	0.958**	0.013	0.964**	0.012	0.956**	0.013	0.962**	0.012	0.963**	0.013	0.961**	0.013	0.970*	0.012	0.964*	0.015
Total Words	1.001	0.001	1.000	0.001	1.001	0.001	1.001	0.001	1.000	0.001	1.001	0.001	1.000	0.001	1.000	0.001
Campaign Visuals	0.902*	0.037	0.849**	0.033	0.881**	0.041	0.877**	0.042	0.839**	0.037	0.858**	0.047	0.841**	0.035	0.823**	0.040
Duration	1.004	0.016	1.004	0.017	1.003	0.016	1.004	0.016	1.002	0.018	1.003	0.016	1.004	0.017	1.001	0.018
Entrepreneur Education	0.375	0.199	0.270*	0.169	0.358	0.188	0.353*	0.172	0.265*	0.168	0.340*	0.169	0.291*	0.168	0.230*	0.142
Entrepreneur Experience	0.582	0.210	0.547	0.208	0.605	0.222	0.522	0.198	0.560	0.214	0.530	0.205	0.510	0.195	0.544	0.207
Trustworthiness			2.894**	0.633					2.874**	0.625			30.374*	44.677	102.921**	161.315
Expertise					1.058	0.032			1.067	0.072	1.104	0.205			1.594	1.106
Attractiveness							2.466**	0.510			2.482**	0.514	3.673**	1.453	4.807**	2.007
Trustworthiness*Expertise									0.989	0.027					0.745	0.217
Expertise*Attractiveness											0.992	0.037			0.910	0.114
Trustworthiness*Attractiveness													0.612	0.180	0.472*	0.147
Expertise*Trustworthiness*Attractiveness															1.066	0.060
Constant	0.053**	0.041	0.039**	0.033	0.066**	0.052	0.001**	0.001	0.046**	0.040	0.002**	0.002	0.000**	0.000	0.000**	0.000
Log-likelihood	-139.33877		-126.95776		-138.27102		-129.65772		-126.54181		-128.79089		-119.82491		-118.39698	
N	1000		1000		1000		1000		1000		1000		1000		1000	

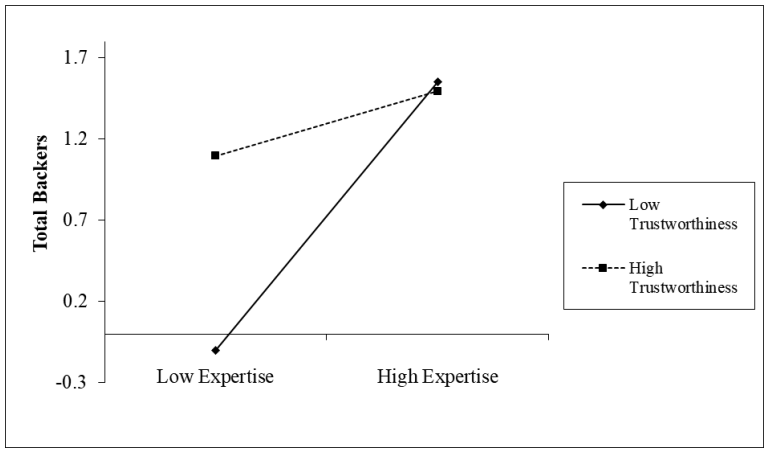
* $p < 0.05$; ** $p < 0.01$

Figure 3: Trustworthiness and Expertise Interactive Effect on Crowdfunding Performance

A: Total Amount Raised



B: Total Backers



Testing My Hypotheses in an Experimental Setting

After conducting my initial analysis, I sought to further examine how the inclusion of credibility visual cues influences backer perceptions of crowdfunding campaigns and affects the likelihood backers will contribute to the campaign. Table 7 provides the mean rating scores and t-values for each scenario across each of the three criteria.

Only the campaign where visual attractiveness was controlled for and manipulated produced significantly different ratings across the three measures (Overall Attractiveness: Control = 5.211, Experimental = 4.285, $p < 0.01$; Overall Credibility: Control = 5.339, Experimental = 4.694, $p < 0.01$; Funding Likelihood: Control = 4.583, Experimental = 4.694, $p < 0.01$). These results indicate that campaign visual attractiveness plays an important role in how backers consider and ultimately decide to contribute to a crowdfunding campaign. Outside of the overall credibility assessment of the campaign where technical specifications are controlled for and manipulated (Control = 5.594, Experimental = 5.313, $p < 0.05$), none of the other scenarios produced significantly different ratings for when the visual cue was present or not in the campaign.

Table 7: Experimental Design Comparison of Means

	Control (Campaign Unaltered)			Experimental (Visual Cue Removed)				
	Mean	Std. Dev.	Obs.	Mean	Std. Dev	Obs.	t-value	Pr(|T| > |t|)
Aesthetic Overall Attractiveness	5.211	1.546	180	4.285	1.813	186	5.265	0.000
Aesthetic Overall Credibility	5.339	1.454	180	4.694	1.727	186	3.873	0.000
Aesthetic Funding Likelihood	4.583	1.867	180	3.925	1.969	186	3.285	0.001
Entrepreneur Visibility Overall Trustworthiness	5.091	1.272	164	4.961	1.392	180	0.908	0.365
Entrepreneur Visibility Overall Credibility	5.171	1.489	164	5.094	1.373	180	0.493	0.623
Entrepreneur Visibility Funding Likelihood	4.280	1.660	164	4.344	1.933	180	-0.330	0.742
Logo Overall Trustworthiness	5.387	1.213	191	5.458	1.111	190	-0.592	0.555
Logo Overall Credibility	5.419	1.215	191	5.500	1.238	190	-0.646	0.519
Logo Funding Likelihood	4.471	1.843	191	4.547	1.792	190	-0.409	0.683
Prototype Overall Expertise	5.511	1.154	186	5.546	1.161	194	-0.300	0.764
Prototype Overall Credibility	5.376	1.406	186	5.371	1.424	194	0.036	0.971
Prototype Funding Likelihood	4.629	1.800	186	4.438	1.809	194	1.031	0.303
Social Media Overall Trustworthiness	5.104	1.321	201	5.000	1.283	199	0.803	0.423
Social Media Overall Credibility	5.169	1.379	201	5.161	1.327	199	0.062	0.951
Social Media Funding Likelihood	4.249	1.897	201	4.402	1.714	199	-0.848	0.397
Social Presence Overall Trustworthiness	5.221	1.165	190	5.238	1.260	193	-0.139	0.889
Social Presence Overall Credibility	5.263	1.278	190	5.316	1.228	193	-0.413	0.680
Social Presence Funding Likelihood	4.537	1.772	190	4.415	1.908	193	0.650	0.516
Specifications Overall Expertise	5.726	1.058	197	5.542	1.063	192	1.714	0.087
Specifications Overall Credibility	5.594	1.211	197	5.313	1.293	192	2.214	0.027
Specifications Funding Likelihood	4.569	1.925	197	4.510	1.778	192	0.309	0.757
Third Party Endorsement Overall Expertise	5.552	1.137	183	5.589	1.279	185	-0.296	0.768
Third Party Endorsement Overall Credibility	5.470	1.296	183	5.276	1.361	185	1.402	0.162
Third Party Endorsement Funding Likelihood	5.005	1.676	183	4.714	1.812	185	1.605	0.109

Post Hoc Analysis

To further explore the impact credibility visual cues have on crowdfunding performance, this post hoc analysis considers the independent effect of each specific visual cue related to trustworthiness and expertise. While perceptions of credibility tend to develop through a collective assessment of various characteristics, it is possible that specific attributes alone provide enough information through which credibility can be established and observer behavior can be influenced (e.g., Metzger et al., 2003; Pornpitakpan, 2004). Further, observers might only need relatively few informational cues to make a determination on credibility (e.g. Fogg et al., 2003; Metzger & Flanagin, 2013). In such cases, while specific visual cues can influence credibility perceptions independently, it is likely that observers can reach a saturation point where the increasing presence of additional credibility cues have little to no impact as it relates to whether credibility is established. Thus, the focus of this post hoc analysis is to examine which visual cues might most strongly affect crowdfunding performance when considered all together. Because attractiveness relates to the overall subjective visual appeal of the campaign and its visual elements as a whole, rather than objective presence of specific visual cues, only the visual cues related to trustworthiness and expertise were included in this analysis.

Table 8 provides the results for each of the three performance variables respectively. For total amount raised, images of a prototype or the product ($\beta = 0.966$; $p < 0.01$), visual specifications ($\beta = 0.436$; $p < 0.01$), third party endorsement ($\beta = 0.019$; $p < 0.05$), visual social presence ($\beta = 0.410$; $p < 0.01$), and entrepreneur or new venture team visibility ($\beta = 0.399$; $p < 0.01$) were all positive and significant. For total backers, images of a prototype or the product ($\beta = 0.721$; $p < 0.01$), visual specifications ($\beta = 0.421$; $p < 0.01$), third party endorsement ($\beta = 0.018$; $p < 0.05$), and visual social presence ($\beta = 0.385$; $p < 0.01$) were all positive and significant.

For funding success, only visual social presence ($\beta = 2.892$; $p < 0.05$) and entrepreneur or new venture team visibility ($\beta = 7.245$; $p < 0.01$) were all positive and significant.

Taken together, these results offer further confirmation that the visual cues identified in this study play a critical role in affecting crowdfunding outcomes. One thing of note is that neither logo nor visual social media links significantly affect performance on their own. Such findings might be affected by the nature of the sample where logo is the most commonly used visual cue (n=575) and visual social media links is the least commonly used (n=81). Although both logos and visual social media links can influence credibility perceptions in isolation (e.g., Halpern & Gibbs, 2013; Ridgway & Myers, 2014), it is likely that the effectiveness of each diminishes when other credibility cues are present.

Table 8: Post Hoc Analysis Results

	Total Amount Raised		Total Backers		Funding Success	
	Coef.	S.E.	Coef.	S.E.	Odds Ratio	S.E.
Funding Goal	0.000**	0.000	0.000	0.000	1.000**	0.000
Staff Pick	0.567**	0.175	0.392*	0.191	3.877	3.699
Video	1.210**	0.208	0.781**	0.169	1.332	0.570
Rewards Levels	0.125**	0.025	0.126**	0.022	1.130*	0.065
Project Updates	0.119**	0.014	0.113**	0.012	1.602**	0.147
User Comments	0.000**	0.000	0.000**	0.000	1.062**	0.013
Numerical Terms	-0.002	0.004	-0.003	0.003	0.957**	0.014
Total Words	0.000	0.000	0.000	0.000	1.001	0.001
Campaign Visuals	0.009	0.010	0.007	0.010	0.820**	0.039
Duration	-0.001	0.005	-0.001	0.005	1.004	0.018
Entrepreneur Sex	-0.223	0.194	-0.056	0.160	0.939	0.520
Entrepreneur Education	-0.369	0.198	-0.093	0.181	0.262	0.192
Entrepreneur Experience	0.108	0.140	-0.056	0.119	0.514	0.214
Logo	0.106	0.157	0.074	0.125	1.928	0.724
Prototype	0.966**	0.155	0.721**	0.135	1.921	0.722
Specifications	0.436**	0.150	0.421**	0.142	0.961	0.481
Third Party Endorsement	0.019*	0.008	0.018*	0.009	1.054	0.033
Social Presence	0.410**	0.144	0.385**	0.135	2.892*	1.274
Entrepreneur Visibility	0.399**	0.148	0.289	0.161	7.245**	3.608
Social Media	0.168	0.228	0.137	0.177	0.823	0.629
Constant	4.466**	0.301	0.675**	0.259	0.056**	0.049
Log-likelihood	-8823.718		-4355.398		-120.917	
N	1000		1000		1000	

* $p < 0.05$; ** $p < 0.01$

CHAPTER 5: DISCUSSION

Beyond the fact that inclusion of visual content is an increasingly necessary condition for crowdfunding success, relatively little is known about what specific visuals directly affect funding outcomes or how visuals influence backer decision making. To begin addressing these questions, this dissertation applies perspectives on source credibility and visual heuristics to identify those visual cues most relevant to crowdfunding performance as well as provide an overarching theoretical explanation for why visual cues matter in attracting funding. Overall, I find considerable evidence that certain visual cues drive crowdfunding performance through enhancing backer perceptions of campaign credibility.

Synthesizing the results of the study, including post-hoc analyses, I find that the presence of visual cues indicative of whether backers can trust the campaign's claims and if the campaign possess the required knowledge and expertise to successfully deliver on campaign promises both positively relate to crowdfunding performance. Additionally, the overall visual attractiveness of the campaign, captured as aesthetic appeal, also positively relates to crowdfunding performance. Further, each set of credibility visual cues exhibit a direct positive relationship with each of the three performance outcomes respectively with the lone exception of the expertise visual cues and funding success relationship. Although the main effect here was positive, it was short of significance ($p= 0.066$). A likely explanation for this unexpected result relates to what funding success is actually measuring.

Kickstarter only rewards funding to those campaigns who were able to fully meet their stated funding goals. As such, whether a campaign is successfully funded or not is greatly influenced by where the funding goal is set. Campaigns seeking a relatively small amount (e.g., <$1000) should therefore have a greater likelihood of meeting that goal given relatively less total

backers and smaller contribution amounts are needed compared to those campaigns with more substantial funding goals (e.g., >$100,000). Thus, while capturing funding success offers a valid performance measure given the nature of the Kickstarter platform, any results drawn should be considered in light of this potential limitation. When such limitations are considered, and combined with the significant positive relationships of the more generalizable performance measures of total funds raised and total backers, it can still be generally concluded that the presence of expertise visual cues have a significant influence on crowdfunding performance.

Interaction effects between the credibility visual cues did not significantly increase the positive relationship between each set of credibility cues and crowdfunding performance respectively. Although prior research suggests such a relationship should exist (e.g., Pornpitakpan, 2004), the results here indicate that the inclusion of additional credibility visual cues offer little benefit once credibility has been established. Perceived credibility therefore is likely is a binary distinction as it relates to venture funding outcomes. It is not considered on a continuum, but rather if it simply exists or not. That two of the moderating relationships produced a significant negative relationship indicative of a potential substitution effect between trustworthiness and expertise visual cues add further support to such conclusions.

The lack of a moderating relationship also provides supporting evidence that visuals do in fact serve as heuristics backers use to make quick assessments. Heuristic processing is an automatic, instinctive process where outcomes only need to be sufficient to reach a satisfactory conclusion (e.g., Evans, 2008; Gilovich et al., 2002). If backers use visuals during their initial assessment to determine whether to further consider a particular campaign, then the minimal information needed to reach that decision should be all that is required. Therefore, that at least one type of visual cue is needed to significantly increase funding likelihood and the presence of

any additional credibility visual cue does not sustainably alter that outcome suggests backers just need to see something related to credibility in order to make their decision. If the moderating relationships were positive and significant, it would suggest that backer assessments and decisions fundamentally changed as more complete information regarding credibility is provided. Such a change would represent a shift from heuristic processing to more analytical processing that considers a more in-depth assessment of more data points (Evans, 2008). Consequently, while the lack of a moderating relationships may be counterintuitive to more classic source credibility perspectives, such outcomes become more logical when viewed from a heuristic perspective. Nevertheless, additional research is needed to further disentangle why the increasing collective presence of multiple credibility visual cues does not substantially enhance likelihood of receiving funding.

Testing the hypothesized relationships in the experimental setting did not produce anticipated effects outside of the attractiveness scenarios. I believe such outcomes likely occurred for one (or both) of two reasons. First, the experiment isolated just one of the individual visuals cues (e.g., logo, third party endorsements) identified in the study for a particular scenario. It is possible that only including or removing that one particular visual cue while keeping the rest of the campaign static may have not created enough variance between what the two scenarios presented to produce significant differences in how the campaign was evaluated. Further, the hypothesized relationships consider the collective effect of visual cues related to trustworthiness and expertise respectively on crowdfunding performance. However, the experimental design considered each visual cue independently. As such, it is likely that trustworthiness or expertise were not evaluated differently between the control and experimental scenarios due to the presence of other visual cues related to each dimension respectively. Second, actual backers tend

to actively seek out crowdfunding campaigns with the intention of contributing real money in exchange for a desired reward. Consequently, these individuals may pay more attention to, and put more consideration into, various informational cues presented in the campaign than will experimental participants who are not at risk of losing financial capital should the campaign fail to deliver on what is promised.

Contributions to Theory and Research

The findings presented here advance current understanding of what campaign characteristics drive crowdfunding performance. Specifically, they challenge current assumptions regarding how the inclusion of visual content can affect funding outcomes. Extant research suggests that use of any visual content can and will positively influence crowdfunding performance (e.g., Courtney et al., 2017; Mollick, 2014; Scheaf et al., 2018), typically as an additional signal of campaign quality. Such findings tend to oversimplify causal effect that occurs and often fail to distinguish between the various types of visual content utilized in crowdfunding campaigns. That nearly all crowdfunding campaigns now include at least one visual component yet the majority fail to meet their funding goals (e.g., Dey et al., 2017; Frydrych et al., 2014) indicates a more nuanced and complex relationship between visual content and crowdfunding outcomes.

Combining insights from source credibility theory (e.g., Hovland et al., 1953; Pornpitakpan, 2004) and visual heuristics (e.g., Townsend & Kahn, 2013), my work takes an important first step towards delineating what visual cues most directly affect funding outcomes when present in crowdfunding campaigns. I provide a theoretically driven framework to identify what and explain how visual cues significantly influence how backers perceive the campaign, the associated venture, and the offered rewards. In demonstrating visual cues that enhance

perceptions of campaign trustworthiness and expertise as well as the campaign's overall visual appeal increases funding likelihood, I demonstrate that visual content provides relevant information backers use to evaluate crowdfunding campaigns. Consequently, my work not only adds needed clarity to the still nascent research examining the role of visual content in crowdfunding outcomes (e.g., Mahmood et al., 2019; Scheaf et al., 2018), but also complements broader emerging research investigating how visuals influence how resource providers consider new venture opportunities (e.g., Chan & Park, 2015; Clarke, 2011).

This study also helps further develop research exploring the role of credibility in entrepreneurial fundraising. Because most entrepreneurs and new ventures lack proven track records or tangible predictors of success (Delmar & Shane, 2004), establishing legitimacy with and being seen a credible to resource providers can be a considerable challenge in securing funding. Prior work on credibility in entrepreneurship has identified a number of characteristics and other signals potential investors rely on to assess credibility (e.g., Courtney et al., 2017; Tirdatov, 2014; Zott & Huy, 2007), yet no clear consensus exists as to what defines credibility within the entrepreneur-resource provider relationship. In taking a source credibility perceptive to explain how credibility-relevant visual cues affects crowdfunding performance, the results here suggest trustworthiness, expertise, and attractiveness as underlying factors critical in shaping credibility perceptions in entrepreneurial settings. While extant research has highlighted the importance of these factors in reducing investor uncertainty (e.g., Brooks et al., 2014; Kuckertz et al., 2015; Maxwell & Lévesque, 2014), it has generally neglected to fully account for how and why these factors affect how funding decisions are ultimately made. By adapting source credibility to the crowdfunding context, I have identified a viable theoretical framework to better explain how credibility is established in new venture settings and why doing so leads to

positive funding outcomes. Indeed, entrepreneurs and their associated ventures together must be able to communicate that they can be trusted, possess a requisite level of expertise, or come across as attractive if they are to be seen as credible investment opportunities.

Finally, my study contributes broadly to multi-disciplinary literature on source credibility. Research based on source credibility has historically focused on analysis of written and verbal communication (Pornpitakpan, 2004). The current research extends source credibility to the visual aspects of communication to examine how visual images can influence credibility perceptions, and ultimately the persuasiveness, of a message source. My results provide empirical evidence that visuals can affect credibility perceptions. As such, I add needed support to recent work that has conceptualized such a relationship but lacks large-scale validation or only considers a specific aspect of credibility in isolation (e.g., Robins & Holmes, 2008; Skulmowski et al., 2016). Further, my operationalization of visual proxies for each source credibility dimensions points toward the potential for future research to continue to adopt a source credibility perceptive to investigate how visual aspects of communication can influence audience decision making and behaviors (e.g., Lowry et al., 2014; Robins et al., 2010).

Implications for Entrepreneurs and Campaign Creators

For entrepreneurs, this study answers questions surrounding how they should craft their crowdfunding campaigns in order to maximize funding likelihood (McKenny et al., 2017). In particular, campaign visuals can serve as an important conduit to communicate key information to potential backers (e.g., Chan & Park, 2015; Clarke, 2011). By leveraging the visual cues identified here, entrepreneurs can quickly establish that their campaigns can be trusted to deliver a viable product or expected reward as promised and that the campaign possesses the required knowledge, skills, and abilities to do so. Further, the findings here also highlight the need for

entrepreneurs to take great care in ensuring their campaigns are visually appealing in presentation (e.g., Scheaf et al., 2018). No matter how novel or intriguing the idea itself is, the campaign will likely struggle to securing funding if it does not do enough to grab the attention of the backer. Therefore, entrepreneurs are cautioned to carefully consider what visuals they choose to include, how those visuals look, and what those visuals convey to potential backers.

More broadly, the findings here also suggest that entrepreneurs avoid rushing into an early launch. Certain visual cues related to credibility such as having a physically assembled product to show or obtaining endorsements from third-parties can take time and effort to gather, yet not including these visual cues can limit potential performance. As such, entrepreneurs might benefit from using the credibility visual cues identified here as a potential checklist of activities to be completed before launching their campaign. If running a successful crowdfunding campaign is the difference between entrepreneurs being able to chase their dreams or having to give those dreams up, then taking the time to ensure all the visual cues needed to appear credible are included can start entrepreneurs off on the right foot.

Limitations and Future Research

The findings of this dissertation should be considered in light of their limitations which open several avenues for future research. To start, this study focuses only on the presence of certain visual cues identified in existing source credibility research as well as their prominent use in crowdfunding campaigns. However, crowdfunding campaigns can feature an array of different visuals beyond what were examined here, some of which might have a similar or more substantial influence on funding outcomes. Accordingly, additional research is needed to further refine the visual source credibility framework as it applies to the crowdfunding context to identify any additional visual cues that may also influence credibility perceptions. Future

research might also explore how specific visual cues common in crowdfunding campaigns shape other perception-based assessments known to influence crowdfunding performance such as which visual cues contribute most to increased backer positive affect towards the campaign (e.g., Davis et al., 2017) or how entrepreneurs might best visually communicate passion for their ventures (e.g., Oo et al., 2018).

Because the intent of this study was to consider how visual cues serve as decision heuristics backers use to make quick assessments, campaign video content was not included in the study as videos require an additional level of attention and effort beyond a simple scan of the campaign. However, campaign video content does provide key information backers might rely on in their decision making (e.g., Dey et al., 2017; Li et al., 2017). Future research might investigate how video content further shapes the relationship credibility visual cues have with crowdfunding outcomes. For example, the inclusion of credibility visual cues may make backers more likely to watch the included video. Even if the video is well-produced and includes a number of cues that can affect credibility perceptions, backers may not consider watching the video if more readily accessible visual cues are not present from which favorable initial impressions can be made. Conversely, backers may be more apt to contribute to the campaign if videos enhance the effect of the visual cue such as showing the pictured prototype in action. Determining whether visual cues and campaign videos enhance the effect of the other related to funding outcomes or potentially act as substitutes could have important implications regarding how backers interact and engage with campaigns.

Another limitation is that only the presence or absence of each visual cue within a specific campaign was considered. While such an approach follows prior credibility research in similar online, transaction-based contexts (e.g., Fogg et al., 2003; Karimov et al., 2011; Metzger

& Flanagin, 2013), it is possible that the relationship between visual cues and crowdfunding performance is more nuanced. For example, where in the campaign the visual cues are included in relation to text-based narrative content could impact overall influence with backers. Visual cues included towards the beginning of the campaign, where they are more likely to be seen at first glance, could have a greater impact on funding outcomes than visuals that appear towards the bottom of the campaign. One logical next step would be to build off the findings here to determine if how the visuals are presented alter their relationship with performance.

Additionally, while capturing the overall aesthetic appeal of the campaign provides some degree of insight in how visual quality affects how campaigns are considered, the current study does not measure visual quality of each specific visual cue directly. It is possible that high quality visual cues (e.g., professionally designed logo rather than a basic computer-generated or hand-drawn one) are given more credence by backers in their decision making (e.g., Mahmood et al., 2019). Although this dissertation argues that the inclusion of visual cues offers relevant information needed for backers to make informed decisions, it would be interesting to see whether the simple inclusion of credibility visual cues or presentation quality of those cues has a larger effect on funding outcomes. Additional research might also consider whether the number of images for each visual cue strengthens the overall effect on performance. For example, though backers might only look to see if the campaign has a social media presence, it is possible that having multiple links to various social media profiles has a greater impact on backer perceptions than having just one.

Determining how visual content interacts with other aspects of a crowdfunding campaign in influencing backer decision making offers a natural extension of the current findings. Campaign narrative content, and the types of rhetoric entrepreneurs use within these narratives,

have a noted impact on funding outcomes (e.g., Allison et al., 2017; Anglin et al., 2018a). Moving forward, research should consider the degree to which campaign visual content and campaign narrative content potentially mediate or moderate the direct relationship the other has with funding outcomes. To do so, scholars might leverage methods from other disciplines. Eye-tracking research, a popular method in the management information systems and marketing literatures (e.g., Tzafilkou & Protogeros, 2017; Wedel & Pieters, 2008), offers an intriguing option to better understand how backers consume the information presented within a crowdfunding campaign. Researchers can track what aspects of the campaign backers consider first and what parts of the campaign backers spend the most time on before funding decisions are made. Tracking what content is primarily absorbed in decision making has the potential to fundamentally change how entrepreneurs construct their crowdfunding campaigns and how they communicate their ventures to backers. For scholars, such results might also affect how crowdfunding research questions are framed moving forward.

Finally, this study also only explores visual cues in rewards-based crowdfunding and, more specifically, technology-focused campaigns. Although technology-focused campaigns tend to coincide with the launch of new ventures where establishing credibility is a particularly critical aspect of securing funding (e.g., Li et al., 2017; Stanko & Henard, 2017), it is possible that the presence of credibility visual cues can also influence outcomes of artistic-focused campaigns (e.g., theatre, music, dance). While backers may support artistic campaigns out of personal preference or an altruistic desire to help others chase their dreams (e.g., Josefy et al., 2016), assurances are still needed that their contributions will be put to good use (e.g., record an album, launch a school play). Accordingly, to ensure the generalizability of the current findings,

future research should consider how the influence of specific credibility visual cues extend to other types of campaigns and if visual cues are more or less important for securing funds.

Given the recent emergence of other forms of crowdfunding such as donation- and equity-based crowdfunding, future research should also examine how the presence of the visual cues investigated here can be generalized to these other crowdfunding contexts. Because different types of crowdfunding models attract diverse sets of backers and investors with different goals and return expectations (e.g., Frydrych et al., 2014; Mollick, 2014), it would be interesting to see if the magnitude of the effects demonstrated here are greater or smaller in crowdfunding contexts where the investors are more sophisticated or whether the relationships exist at all. On one hand, the online nature and sheer volume of active campaigns would suggest that the inclusion of specific visual cues, especially those that can help the entrepreneur quickly establish credibility with backers, will substantially influence funding outcomes in any crowdfunding context.

On the other hand, equity crowdfunding can attract more experienced and knowledgeable investors compared to rewards-based crowdfunding (e.g., Ahlers et al., 2015; Lin et al., 2014; Vismara). Their extensive knowledge and experience may lead them to focus more on economically relevant information given their contributions are driven more by potential financial return than a desire for the product or service being offered (e.g., Hornuf & Neuenkirch, 2017). As such, visuals cues might still be important for capturing attention but might not have the same impact on funding decisions. Conversely, it is possible that visual cues have a stronger effect in donation-based crowdfunding where backers might be hesitant to provide funding without seeing who or what their donation is going towards. Thus, research is needed to explore whether differences in the various crowdfunding models and the expected

returns as well as the different types of backers each model attracts creates different reactions to visual cues.

CHAPTER 6: CONCLUSION

This dissertation takes an important first step towards clarifying how visual content in crowdfunding campaigns impacts funding outcomes. While prior research has generally focused on how the inclusion of any visual element can affect crowdfunding performance, I identify which visual cues, when present, allow entrepreneurs to substantially increase their chances to secure funding. Specifically, including pictures of the entrepreneur or new venture team, a venture logo, visual links to social media profiles, images with high degrees of social presence, visual technical specifications, images of prototypes or the product, and visual endorsement, award, or accreditation from third-party organizations can each help entrepreneurs establish the credibility needed with potential backers to secure funding. For scholars, this work provides direction for how visual content should be considered in crowdfunding research. Additionally, this study demonstrates how source credibility theory can be leveraged to better understand the factors that influence credibility perceptions in entrepreneurial fundraising. For entrepreneurs, the findings here offer a recipe for content that should be included when crafting their crowdfunding campaign in order to maximize their chances of acquiring needed capital.

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