

# The Effect of Storytelling on Willingness to Invest in Crowdfunding Projects



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## **Abstract**

We conducted this study in order to find out whether surprise, suspense and curiosity storytelling types can have a positive impact on willingness to invest in crowdfunding projects. Furthermore, we wanted to find out if the effect of surprise, suspense and curiosity storytelling types depends on the type of personality of investors. The results of our multiple regression showed that the impact of the three story types depends on the personality of investors. Therefore, surprise stories increased willingness to invest when investors had high need for closure, as well as in the case of older participants. Suspense stories increased willingness to invest, but only for investors who did not have high need for closure. Finally, curiosity stories increased willingness to invest for investors who had lower levels of epistemic curiosity. Additionally, we found that females and younger participants were more willing to invest than males and older participants. Moreover, we found that people who have high need for closure were more inclined to invest. Finally, we found that investors are more willing to invest in fashion projects, than in photography projects. Thus, investment likelihood depended on type of project being offered.

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# 1. Introduction

In the current age, the start-up environment has become ever extremely competitive where start-ups find it more and more difficult to fund their projects. Therefore, they turn to alternative methods of investing such as crowdfunding.

One of the definitions of crowdfunding is “financing of a project or a venture by a group of individuals instead of professional parties (e.g. instead of venture capitalists)” (Schwienbacher & Larralde, 2010). The most prominent crowdfunding communities are Sellaband, Kickstarter, Just Giving, Prosper etc. All of the mentioned crowdfunding means are same in the way that they use crowdfunders for financing projects, but differ in some other aspects such as the share of profit (Kuppuswamy & Bayus, 2015). Some crowdfunding methods often do not offer financial returns to crowdfunders (e.g. Just Giving), some of them offer non-financial rewards (e.g. Kickstarter), while some of them offer an actual share of profit (Sellaband).

However, seeking investment opportunities through crowdfunders is challenging. In fact, most of the crowdfunding projects do not reach their funding goals, thus they fail to get funded (Mollick, 2013). Therefore, start-ups need to use proven persuasive methods to increase their chances of getting investments. There are many persuasive tools which businesses have at their disposal in order to persuade crowdfunding investors. One of those tools is storytelling.

Storytelling has for quite some time now gained a lot of attention as a potentially powerful persuasive tool, simply because people like stories much more than advocacy narratives (Green & Brock, 2000). The topic of storytelling has the potential to have great implications for small businesses, managers and public speakers. For example, storytelling was previously used to improve preference of products (Fenger, Aschemann-Witzel, Hansen & Grunert, 2015).

One of the reasons why storytelling has a positive effect is because of transportation. Transportation is defined as “immersion in the text.” In other words, transportation is the extent to which a reader is mentally involved in the story. Therefore, the mental immersion causes the reader to have less critical approach and to rely more on affective decision making and feelings (Green and Brock, 2000).

The consumers who do not process the information critically or do not rely on strength of arguments mostly rely on affect. One of the definitions of affect is “a feeling or state that

may range from strongly positive to strongly negative.” (Burgdorf, Panksepp & Moskal, 2010). Using affect in ads seemed to produce positive effects like better ad and/or brand recall (Albers-Miller & Stafford, 1999; Mehta & Purvis, 2006) or change in consumer preferences and opinions (Achar, 2016).

However, sceptical audience viewers might be difficult to persuade through affect, because they rely more on the strength of arguments (Escalas, 2007; Escalas, J., & Stern, B. 2003). Therefore, we can conclude that when stories are used to persuade, there are two types of audiences. First type is made of people who rely on affect of stories to form judgements and make decisions, while the second type of consumers are the ones who rely on the strength of arguments to form judgements and make decisions (Breckler & Wiggins, 1989a).

There are many different types of storytelling. One of those types is structural affect storytelling which is explained by the structural affect theory. It describes each story as a description of series of events which has a specific discourse structure or the order of narrated events in a story. Discourse structure can be used to evoke certain emotions, which are believed to have positive impact on the audience’s likability of a story (Hoeken & van Vliet, 2000). Although, there are various ways a story can be structured, three story structures are considered to be most effective: surprise, suspense and curiosity story structure (Brewer & Lichtenstein, 1982).

## **1.1 Problem Statement and Research Question**

The central point of this research revolves around how businesses can use storytelling in order to impact crowdfunders to invest money in their projects.

Investors are known for relying heavily on strength of arguments of business ideas before investing. Furthermore, when financial stakes are high, investors will especially look for financial benefits of a project. However, when financial stakes are lower, investors will care more about the moral side of business projects. Therefore, in a low financial stake context, investors could be more prone to relying on information such as storytelling when making their investment decisions (Doskeland, & Pedersen, 2015).

On the other hand, research done on crowdfunding shows that crowds’ investment decisions were congruent with the decisions of investment experts in certain projects. Namely, several projects which were financed by crowds and projects which were overfunded were rated high by experts, which is a proof of congruence between crowd and expert investment decisions. However, the projects which were liked by experts but disliked by

crowds, were the projects with less visual information like videos or pictures (Mollick & Nanda, 2015).

This behavior is in congruence with the research by Petty and Cacioppo (1986), which found that audience with less motivation and/or ability to rely on strength of arguments will turn to peripheral cues (e.g. videos) for making decisions. Even though, the stakes for investors are lower in crowdfunding communities, crowdfunding has been a big market lately. Crowdfunding communities have experienced rapid growth in recent years and it is predicted they will keep on rising in the future. Therefore, businesses can benefit greatly if they make the right decisions in crowdfunding platforms (Agrawal, 2014).

Considering this phenomena, we can speculate that storytelling can be used effectively in crowdfunding, because crowdfunding investors are prone to affective decision making, while storytelling has been shown to have a very strong persuasiveness, especially by evoking affect.

Therefore, the main aim of this study is to find out if crowdfunding investors are more willing to invest in business projects that use structural storytelling in their start-up projects compared to same projects which do not use storytelling. Furthermore, this study will try to find whether the effect of storytelling depends on different personality types of investors. In other words, investors with different personalities will be affected differently by each story type.

The findings of this research can give us understanding of whether storytelling can be applied as a persuasive tool, which can be used for attracting investors. Moreover, we could understand how to target different types of investors, based on their personalities.

## **1.2 Academic and Managerial Relevance**

Research on storytelling and its structures has not been studied extensively. Furthermore, studies on crowdfunding are just recently starting to emerge, therefore this field is another field which needs to be studied on different levels in order to see what the real potential of this way of fund sourcing is.

Academic implications of this research can benefit two streams of literature. First of all, it can benefit the literature of consumer psychology and behavior (Babin, Darden & Babin, 1998; Haugtvedt, Petty & Cacioppo, 1992; Laros & Steenkamp, 2003). This field of study deals with consumer purchase behavior, choices, preference and feelings toward different products or services. Therefore, we could find out whether using different types of

storytelling which are based on different text structures could be a strong persuasive tool. This study focuses on three very important emotions, and they are surprise, suspense and curiosity (Hutter & Hoffman, 2014). Additionally, the findings of this study can explain the consumer choices and preferences based on their personality (Haugtvedt, Petty & Cacioppo, 1992).

Secondly, this work can have implications on the field of crowdfunding and investment (Belleflamme, Lambert & Schwienbacher, 2014; Fried & Hisrich, 1994; Herzenstein, Sonenshein & Dholakia, 2011; Kuppuswamy & Bayus, 2015). It can help managers understand how the use of storytelling can fit in the context of persuading in crowdfunding and investment, as well as other factors such as financial rationality and consumer demographics. Previous research has focused on other variables like time variable of a project (Kuppuswamy & Bayus, 2015) or the effect of narratives on funds lending (Herzenstein, Sonenshein & Dholakia, 2011). This research focuses more on affect and arousal of emotions of the audience.

Managerial implications of this research would be that managers or owners of small businesses could increase the likelihood of their projects getting investments. If more projects would be funded, there is more chance that creative business ideas will succeed. This further has implications on a macroeconomic level, where an increase in successful start-ups leads to a positive economic atmosphere of an economy. Furthermore, the success of projects on crowdfunding communities like Kickstarter can motivate other young entrepreneurs to try to seek funding on Kickstarter or other crowdfunding communities. This implies that both the start-ups/young entrepreneurs and Kickstarter or other crowdfunding portals could benefit.

Additionally, this research does not have to limit itself only on managers and business owners at crowdfunding communities, but it can have wider implications. In line with the research of Mollick and Nanda (2015), there is evidence of congruence between crowdfunding investments and decisions of experts. Thus, this research can have implications for investors such as venture capitalists or at least it can open the gate for future research in this direction.

### **1.3 Thesis Structure**

First part of this study covers the reviewing of literature which has been done on the topics of crowdfunding, storytelling, decision psychology, emotions and other subjects which are related to the topic of this research. Following the review of literature comes the hypothesis development. Afterwards, a survey is done in order to collect the relevant data



using reliable tools for finding respondents as well as using relevant scales. Furthermore, the collected data is analysed using multiple regression analysis. Finally, the discussion interprets the results of the regression and explains the findings of the study. The discussion part includes the managerial and academic implications, as well as the implications for future research.

## **2. Review of Literature and Hypothesis Development**

This study covers four different topics of literature. First part of literature is about crowdfunding and investment. Second part of the literature talks about storytelling. Third part of literature covers decision making and human cognitive processing. Finally, the last part of literature explains the role of emotions in consumer behavior.

The summary of table literature is in appendix 1.

### **2.1 Crowdfunding and Investment**

Crowdfunding has recently become a very popular way of funding new ventures and ideas. One of the definitions of crowdfunding is: “financing of a project or a venture by a group of individuals instead of professional parties (e.g. banks, venture capitalists or business angels)” (Schwienbacher & Larralde, 2010). As noted by Kuppuswamy and Bayus (2015), crowdfunding is a funding community which is still in its infancy. Thus, we can assume that crowdfunding can only grow bigger.

Some of the research done on crowdfunding show that crowdfunding has some patterns which makes it in some way a unconventional way of financing. Stats from year 2006 show that majority of products do not eventually reach their funding goal (Mollick, 2013). However, the projects which do reach their goal, get their funding in different time patterns. For example, most of the projects get funded in the beginning and ending of a funding cycle (Kuppuswamy & Bayus, 2015).

In a study done by Mollick and Nanda (2014), we learned that the projects which were funded by crowds were usually the projects which were highly rated by experts. However, certain projects were not supported both by crowds and experts. For example, many project which were highly rated by experts, but contained less visual information like video or pictures, were rated highly by experts but not funded by crowds.

The study which is directly related to both crowdfunding and storytelling is the study done by Herzenstein, Sonenshein and Dholakia (2011). They researched how number of identity claims, which included narratives, can influence decisions of lenders to loan money and reduce interest rate. They found that indeed, the number of identity claims positively influences loan funding and reduction of interest rate.

One characteristic of crowdfunding is that it resembles charity-like behavior. Since many crowdfunding platforms do not offer real materialistic rewards for the investors, it is possible to speculate that the intentions of crowdfunders are more of an altruist nature, since individuals who give charity show altruistic behavior. One of the reasons why people prefer altruism are: removal of guilt, sympathy, empathy, commitment to a religion etc (Hsu, Liang & Tien, 2005).

There are many other variables that can impact investment decisions as well. Studies done on the relationship between investment decision making and gender found that males are more confident when it comes to betting decisions than females (Bruce & Johnson, 1994). Furthermore, males are less risk averse when it comes to investing money, while females are more hesitant and have more risk averseness (Graham, Stendardi, Myers & Graham, 2002). Thus, males are less risk averse and more willing to invest high risk projects, whereas females are more risk averse and less confident, thus they are more inclined to invest in less risky projects which give smaller returns.

## **2.2 Storytelling**

Scholars have previously recommended storytelling as a powerful tool in management and business (Fryer, 2003; Baldoni, 2011). As mentioned by Denning (2006), use of storytelling by CEOs and company owners as a motivational tool is on the rise.

In a study done by Baesler and Burgoon (1994), there was evidence that statistical data, vividness of a message and storytelling had persuasive influence on the audience, but this influence was on a short time period (48 hours). Escalas and Stern (2003) found out that use of storytelling can decrease critical thinking, thus any potential errors in strength of arguments can be concealed. However, this decrease of critical thinking is not likely to occur if the audience is highly sceptical (Escalas, 2007).

Storytelling can have both peripheral and central implications for brands. Woodside, Sood and Miller (2008) mentioned how brand bloggers, which basically express themselves through storytelling, use characters as archetypes to whom customers can relate to.

In a study done by Delgadillo and Escalas (2004), it was discovered that word-of-mouth message to recipients was mediated by storytelling. Lien and Chen (2013) found that when stories are used in ads, there is a high probability that the audience will focus more on stories rather than on the strength of arguments to make conclusions about the ads and products sold.

In a study about loan crowdfunding, Herzenstein, Sonenshein and Dholakia (2011) found that number of identity claims and the content of those claims in narratives of borrowers increases loan funding. Also, psychological impact of a story does not matter if the story is fiction or non-fictional, because research shows that fictional narratives cause long-term change in perception (Appel & Richter, 2007).

One reason why stories might be so influential on people's behavior and the way of thinking might be due to the ability of stories to evoke emotions and feelings. One certain aspect that has persuasive and belief changing implications is transportation. Transportation can be defined as absorption into a story. It causes affect and vivid imagery, as well as increasing attention and focus. This particular name is used because the reader is transported from the reality to the world of a story, whereby he loses (for a moment) a sense of reality and accepts the world of the story (Green & Brock, 2000; Escalas, 2004).

Furthermore, past research has shown that different story structures also have significant impact on the psychological state of readers (Johnson & Mandler, 1980). One way that psychological process that are related to story can be explained through story schema. Different story genres have different purposes, and these purposes are called discourse forces. For examples, discourse forces of fables are used for persuasion, while discourse forces of novels are used to entertain. In anyway, stories are considered to be a subclass of narratives, and their main goal is to entertain. Discourse force implication is noticed in the discourse organization in typical story types. For example, three types of story structures were noticed and they are: *surprise*, *suspense* and *curiosity* (Brewer & Lichtenstein, 1982; Hoeken and van Vliet, 2000).

In surprise story structure, early in the story's sequence, a critical descriptive information is always present. However, this critical information is omitted from the discourse without reader's awareness of this, and then this information is inserted later in the story. The reader will be surprised when the omitted information is revealed, but the surprise is resolved due to the new information causing re-interpretation.

In regards to suspense story structure there must be an initiating event. This initiating event has big consequences for the story and it appears early in the story. It causes the reader

to be concerned about the story's character. Furthermore, there is always additional discourse material which makes suspense grow from the initiating event until the outcome. The reader's suspense disappears after the outcome is shown.

Curiosity story structure has a critical event early in the story. However, this information is omitted from the story, but the readers are aware that the information is omitted. The omitted information makes the readers wander about the omitted information, therefore audience's mental state is affected by curiosity.

In addition to all the above mentioned structures, all of them need to have a resolved ending, either good or bad, in order to have an impact on the audience. Furthermore, the congruence of story's outcome and the reader's expectation preference for the outcome might, as well as attitude towards the main character can affect the likeability of a story (Comisky & Bryant, 1982; Moulard, Kroff & Folse, 2012; Rapp & Gerrig, 2007).

## **2.3 Consumer Cognitive Processing**

### *2.3.1 Systematic vs. Heuristic Cognitive Processing*

The economists have considered consumers (ordinary people) to be rational, psychologists saw them as irrational and prone to cognitive biases, while sociologists considered them to have evolved and became critical and savvy due to development of information technology. A lot of research has shown that consumers often fall under the influence of cognitive biases, thus their critical approach is very questionable (Arcidiacono, 2011).

In order to understand rational behavior, we can relate to the research done on heuristics and biases. A decision problem is a choice which a person makes in regards to what the person does or what option the person opts for. A decision frame is defined as: "conception of the acts, outcomes, and contingencies associated with a particular choice". This decision frame is controlled by the formulation of the problem, but also by the mental state of the decision maker. Furthermore, the decision state of the decision maker is formed by his upbringing, the culture where he lived in, personality type etc. (Kahneman & Tversky 1981)

If we talk about rationality, then the rational decision making is mostly considered to have two important elements, and they are consistency and coherence. This means that the choice of the decision maker should not change with the change of frame, thus it should

always be consistent and coherent. However, that is not the case with most people, because people have continuously shown that the change of frame results in change of preference, thus change in decisions. Therefore, we conclude that the human cognitive processing is prone to inconsistency, which consequently leads to decision errors (Kahneman & Tversky 1981).

Another example where human cognition makes errors is in direct information processing. For example, when the information is insufficient and/or very complex, people will rely on heuristics (shortcuts) to make decisions. In other words, the consumers will use intuition to make decisions or choices. This is supported by the findings in neuro psychology, where higher amygdala activities showed more susceptibility to heuristics, biases or intuition. Amygdala is closely related to emotional processing rather than rational. On the other hand, the higher prefrontal activities showed reduced susceptibility to decision biases (De Martino, Kumaran, Seymour & Dolan, 2006).

Based on these findings about the cognitive processes, we can identify two modes of information processing. First is the rational mode of processing, and we can call it systematic modes of processing. The second one is heuristic or biased processing, and we can call it heuristic mode of processing (Chen, Duckworthy & Chaiken, 1999).

Since financial and investment decision include uncertainty, high risk and complexity, investors often rely on intuitive judgements and heuristics. Since heuristic approach to decision making is prone to mistakes, there are several errors which occur as the result. These error come in various forms such as overreaction to chance events, non-linear weighting of probabilities, price reference points etc. (Kahneman & Riepe, 1998)

One well known cognitive error which can have implications in marketing is hindsight bias. Hindsight bias is a “new it all along” feeling, where outcomes seem very predictable only after they have occurred. It makes unexpected situations seem foreseeable and it also works like a type of memory distortion, where memories are amended only after the events occur. It is closely linked to personality trait of need for closure and it consequently causes overconfidence (Roese & Vohs, 2012; Webster & Kruglanski, 1996).

However, relying on heuristics does not always mean wrong decision process. For example, Canadian Invention Assistance Program has experts who predict the commercial success of business projects by relying on decision heuristics. Research shows that their forecasting success matches or even surpasses some statistical models. By making a conjunctive model, the best cues were used to predict the commercial success. The positive takeaway from this finding is that relying on these kinds of heuristics can save time and mental burden of the evaluators or decision makers (Astrebo & Elhedhli, 2006).

The explanation of why sometimes heuristics can work and in other times they do not, could be due to the type of task which is presented. Some scholars suggest that the tasks that can be decomposed or solved sequentially should not rely on heuristics, but they should rely on logic or analytical tools. However, the tasks that are more holistic and less sequential could successfully use heuristics in their problem solving or decision making. However, as in the case of analysts from the Canadian Invention Assistance Program, not all people should rely on heuristics even in more holistic contexts. Therefore, these decision heuristics should be used by experts or people who have long experience in using the intuitive judgement (Dane, Rockmann & Pratt 2012).

### *2.3.2 High vs. Low Cognitive Involvement*

The research done on two systems of thinking, the systematic vs. heuristic way of thinking is similar with the research done on high vs. low cognitive involvement. This body of research shows that some people do not like to use a lot of cognition when evaluating messages or products, but they rely on peripheral cues, such as an expert's advice to form opinions and make conclusion. However, other people rather rely on the quality of arguments presented in a message (Holmes & Crocker, 1987). Reason why some people prefer strong argumentation is because they find satisfaction in searching new information or experiences (Baumgartner & Steenkamp, 1996; Litman & Spielberger, 2003).

Petty & Cacioppo (1986) identified these two modes of cognitive involvement as the central route to attitude, which is the high cognition route, and the peripheral route to attitude, which is the low cognition route. They named this model as the elaboration likelihood model (ELM), which states that in case when elaboration likelihood is high, there is a bigger chance that the central route will be used. However, if the elaboration likelihood is low, the peripheral route will be used more frequently. Reason why people use either central or peripheral route is due to motivation, personality type, ability to think and personal consequences (Petty & Cacioppo, 1982; Sojka & Giese, 2001). Therefore, low involvement comprehension is called affective component of attitude while high involvement is called the evaluative component of attitude. (Breckler Wiggins, 1989a; Petty & Cacioppo, 1986).

High vs. low cognitive involvement also depends on product type. Most products fall under either high involvement or low involvement category. For high involvement products, active information processing shapes product or service preferences. On the other hand, low involvement products require less information processing, thus consumers might act before

even forming an attitude. It is debatable which products can be classified as low involvement or high involvement, but factors like consumers' financial risks might be a good indicator. Therefore, when consumer decides to purchase an expensive product like a new car, the financial risks are high, thus the consumers is likely to process information more and invest more energy in thinking. However, when the product does not carry high financial risks like a can of Coke, the consumers tend to be less involved in information processing, and rely on the side of a message or an ad which evokes pleasurable feelings (Holmes & Crocker, 1987).

Additionally, intelligence is also a factor which impacts attitudes and decisions. In a study done by Watts (1973), there is evidence that opinion change depended on intelligence, and this relationship was mediated by strength of arguments as well.

## **2.4. The Role of Emotions/Affect in Consumer Behavior**

As mentioned previously, many consumers do not evaluate information based on heavy cognitive processing, but rather they do it through other ways, especially if those other ways would evoke a certain emotion or affect (Babin, Darden & Babin, 1998; Laros & Steenkamp, 2003). "Affect refers to a feeling state that may range from strongly positive to strongly negative." For example, positive affect can be very effectively evoked when people socialize or when people receive positive feedback, receive gifts etc. (Burgdorf, Panksepp & Moskal, 2010). However, emotions do not come in a two-dimensional form, but can take four dimensions which are: evaluation-pleasantness, potency-control, activation-arousal and unpredictability (Fontaine, Scherer, Roesch & Ellsworth, 2007).

Furthermore, there are both behavioral and biological differences in the way people experience emotions. The core of these differences stems from the individual differences in personality, where the same emotions are experienced differently based on personality types which people possess. For example, some individuals prefer and seek out the experience of emotions, while others avoid it (Hamann & Canli, 2004; Haugtvedt, Petty & Cacioppo, 1992; Kuppens, Stouten & Mesquita, 2009; Maio & Esses, 2001).

Another thing to consider about emotions is the problem of emotional valence. In other words, when emotions are aroused, they might have a negative or neutral valence, which can have a negative or insignificant effect on market activities. An emotion which is particularly important for this study and can have binary valence is surprise. There are different opinions among scholars about this emotion. Some scholars think that surprise is just an emotion (Ekman, Levenson & Friesen, 1983; Maguire, Maguire & Keane, 2011;



Vanhamme, 2000), while others see it as a cognitive state (Mellers, Fincher, Drummond & Bigony, 2013) or an amplifier of other emotions (Reisenzein, 2012). Furthermore, the nature of surprise depends largely on factors like cognitive errors and culture (Mellers, 2013) and even age (Schutzwohl & Reisenzein, 1999). Finally, the cause of surprise is schema discrepancy (Schutzwohl & Reisenzein, 1999) and mismatch in information processing (Lorini & Castelfranchi, 2007).

Another emotion which can have binary valence is suspense. Although, there is no clear definition of suspense, suspense is considered to be an emotion or affect which is strongly related to the uncertainty of an outcome. Furthermore, the outcome needs to carry importance to readers or audience in order to be effective in generating suspense. Another factor which can amplify suspense levels is if the audience likes the main character of a story (Comisky & Bryant, 1982; Moulard, Kroff & Folse, 2012).

Finally, curiosity is another emotion which is highly relevant for this study. Hill, Fombelle and Sirianni (2015) found that the emotion of curiosity is elicited by mystery. For example, wrapping a product in a box, but not revealing what the product was, makes consumers interested in knowing what is inside the box. Furthermore, the evoked curiosity leads to higher purchase motivation, with medium levels of curiosity producing the highest motivation compared to low and high levels of curiosity.

The use emotions have been consistently used in marketing over the past years. In advertising and branding, emotions have been used as a mean of better ad and/or brand recall. Thus, emotions have ability to impact consumers' memory (Albers-Miller & Stafford, 1999; Mehta & Purvis, 2006).

One way marketers persuaded consumers to have a higher interest in products, better knowledge toward products, favourable product evaluation and purchase intention was by evoking curiosity (Hill, Fombelle & Sirianni, 2015; Menon & Soman, 2002).

Attitudes towards brands and ads can be impacted through visual design, like use of good design on online websites (Shaouf, Lu & Li, 2016) or type of music which can have both a positive or negative effect on ads, depending on context and execution (Lantos & Cranton, 2012). Emotions of surprise and suspense were both used as means to successfully improve attitudes towards ads and indirectly lead to increased sales (Hutter & Hoffman, 2014; Alwitt 2002).

Emotions have ability to move people to action, which is a key concept in marketing and business. For example, emotions and willingness to act have been studied in psychology in order to find out how the state of mind of audience and the context of a messages affected



the outcome of their preferences. The studies have shown that persuasion and willingness to act increased when emotional frame of the message was congruent with the state of mind of the audience (DeSteno, Petty & Rucker, 2004).

Marketers have also used emotions to change consumer preferences and opinions. For example, they used self-accountability messages to evoke emotions like guilt, regret etc. Additionally, love-inducing ads made consumers more willing to give to charities. Furthermore, ads used mimicry to increase sympathy by showing sad faces (Achar, 2016).

However, more utilitarian products might require strong arguments, and emotions might not do much to increase persuasion. Therefore, ads and other persuasion methods should always depend on the audience that is being targeted (Johar and Sirgy, 1991).

The studies of emotions have been also done in political sciences. For example, it was studied why the emotional charged election ads produced success. Emotions in these ads were evoked through the use of vivid imagery or emotional music. To be more specific, some candidates used the emotions such as enthusiasm or fear in order to persuade voters to vote. Enthusiasm strengthens the will of voter to commit to achieve certain goals and strengthens the motivation to act. Also, enthusiasm made voters more interested in the campaigns and increase the willingness to vote. On the other hand, fear increases awareness and feeling of threat, including a possible shift in decision making. Therefore, emotions have a persuading role (Brader, 2005).

Finally, affect or emotions can have a significant impact on decision making. The post-choice satisfaction largely depends on both the anticipated and irrelevant emotions. Emotions like regret were evoked due to unpleasant scenes. Therefore, people's decision choices depend on improvement of emotional experience (Bandyopadhyay, Pammi & Srinivasan, 2013).

## **2.5 Hypothesis Development**

As previously mentioned, ads which include a story get more easily processed, accepted and evaluated than the ads without a story (Lien & Chen, 2013). This happens due to reasons such as story transportation (Green and Brock, 2000), story structure (Brewer & Lichtenstein, 1982; Hoeken & van Vliet, 2000) and other factors which cause pleasure and entertainment. According to structural affect theory, there are three basic story structures. Therefore, our main independent variables will come in form of three different story structures which are surprise, suspense and curiosity.

### *2.5.1 The Effect of Different Types of Stories on Willingness to Invest*

The surprise story is structured in a way that early in the story's sequence, a critical descriptive information is always present. However, this critical information is omitted from the discourse without the reader's awareness, and then this information is inserted later in the story. The reader will be surprised when the omitted information is revealed, but the surprise is resolved due to the new information causing re-interpretation. Therefore, the surprise which was caused by the way the story was structured, will evoke positive affect (Brewer & Lichtenstein, 1982; Hoeken & van Vliet, 2000).

Surprise is an emotion which was used in previous studies to create positive affect. For example, retailers have used ambient media to draw attention, increase positive attitudes toward ads, increase word-of-mouth, increase intentions to buy and increased sales revenues (Hutter & Hoffman, 2014). In the same manner, we expect that surprise evoked by stories will increase positive attitudes toward crowdfunding projects. Therefore, these positive attitudes toward the project will make the crowd funders more likely to invest in the project. Therefore:

**H1:** A crowdfunding project which includes a story of a surprise structure has a higher likelihood of investment, compared to the same project that has no story.

In the suspense story discourse, there must be an initiating event. This initiating event has big consequences for the story and it appears early in the story. It causes the reader to be concerned about the story's character. There is also an outcome of this event. Furthermore, there is always additional discourse material which makes suspense grow from the initiating event until the outcome. The reader's suspense disappears after the outcome is shown (Brewer & Lichtenstein, 1982; Hoeken & van Vliet, 2000).

In order to understand how suspense can increase investing intentions we can relate to study done by Alwitt (2002). Alwitt defines suspense as "a cognitive and emotional reaction of a viewer, listener, or reader that is evoked by structural characteristics of an unfolding dramatic narrative." Additionally, suspense produces another two emotions which are fear and hope. Suspense makes the audience wonder what the outcome will be, and increases the concern for the main character. The emotions caused by suspense causes the audience to engage in the ad. Consequently, suspense ads create better attitudes than the non-suspenseful

ads. Thus, we expect that suspense story will bring positive attitude toward crowdfunding projects, thus a bigger chance of getting investments. Thus:

**H2:** A crowdfunding project which includes a story of a suspense structure has a higher likelihood of investment, compared to the same project that has no story.

In the curiosity text structure, the critical event is present early in the story. This information is omitted from the story, but the readers are aware that the information is omitted. The omitted information makes the readers think about the omitted information, therefore the readers should have a positive affect toward the project, which is caused by curiosity (Brewer & Lichtenstein, 1982; Hoeken & van Vliet, 2000).

Curiosity can be defined as “a desire to know, to see or experience that motivates exploratory behavior directed to acquisition of new information”. Curiosity is considered to be a cause of positive affect and knowledge acquisition, especially when it causes the feelings of intrinsic rewards and pleasure. Curiosity reduces uncertainty and is the mean of achieving optimum levels of pleasure, contrary to over and under aroused states (Litman, 2015).

Menon and Soman (2002) found that internet ads which had “a knowledge gap” with new products facilitated curiosity. Curiosity was manifested by making the audience elaborate about the stimulus. Thus, the audience had more interest to learn about the product. Eventually, curiosity caused better product evaluation and perceived novelty.

Similarly, curiosity could be used in crowdfunding, project, and more specifically in stories which are told in the projects in order to facilitate knowledge seeking and state of optimum pleasure. Therefore:

**H3:** A crowdfunding project which includes a story of a curiosity structure has a higher likelihood of investment, compared to the same project that has no story.

### *2.5.2 The Impact of Moderating Variables on The Relationship between Different Types of Stories and Willingness to Invest*

Although, storytelling was hypothesized to have the main effect on willingness to invest, investment decision depends on other factors as well. Primarily, the effect of stories on willingness to invest is moderated by factors such as the individual differences in experiencing emotions. Individuals experience emotions differently (Kuppens, Stouten &

Mesquita, 2009; Hamann & Canli, 2004). There are individuals who willingly seek out either the cognitive and/or emotional experiences, while other individuals try to avoid them (Maio & Esses, 2001; Petty & Cacioppo, 1986). Therefore, emotions of surprise, suspense and curiosity will be experienced differently by different individuals due to the differences in their personality traits.

Surprise occurs as the result of unexpected events. Unexpected events are all events which deviate from normal cognitive schema and sequence, and consequently causes the arousal of surprise. The arousal sets the cognitive and physical attention toward the unexpected event in order to analyse it carefully (Schutzwohl & Reisenzein, 1999). Additionally, surprise occurs as a response to mismatch between the incoming information about an event and previous knowledge about the same event (Lorini & Castelfranchi, 2007). In other words, surprise is caused by unpredictability of the sequence of events which makes people analyse more carefully why the sequence is not following a normal order.

The valence and arousal of surprise can be influenced by cognitive errors such as the hindsight bias, and especially one aspect of hindsight bias which is called need for closure. Need for closure is a personality trait of people who like order, control and predictability, and dislike disorder and unpredictability (Mellers, 2013; Roese & Vohs, 2012). Therefore, any unexpected or unpredictable event will be re-interpreted and resolved quickly by the person who has a high need for closure, in order to protect and safeguard the order of a normal schema or sequence of events (Webster & Kruglanski, 1996).

Consequently, we expect that individuals who are high on need for closure will dislike schema discrepancy. Thus, they will reinterpret unexpected events of surprise stories in order to avoid schema discrepancy and keep the normal sequence of events which is associated with control and predictability. This reinterpretation will cause surprise to have a lesser effect. Thus:

**H4:** The effect of surprise story structure on willingness to invest will be negatively moderated by higher levels of need for closure of investors.

Suspense depends on factors such as uncertainty and importance of an outcome as well as the liking of the main character (Comisky & Bryant, 1982; Moulard, Kroff & Folse, 2012), which consequently produces either the emotions of fear or hope. When a person anticipates that an event will cause physical harm or emotional pain as the outcome, which is called avoidance appraisal, this feeling will produce fear. On the other hand, when a person

expects physical or emotional pleasure from an event, which is called approach appraisal, it will cause hope (Moulard, Kroff & Folse, 2012).

Both fear and hope evoking suspense stories will cause a certain level of arousal. The level of arousal in suspense stories will depend on the personality type of the person, where a hopeful person will be more aroused by the hope generating suspense story, and fearful person will be more aroused by a fear generating suspense story. High arousal levels should cause the story to be more interesting and likeable. This positive attitude towards the story leads to positive attitude towards the project. Thus:

**H5:** The effect of suspense story structure on willingness to invest will be positively moderated by higher levels of fearfulness of investors.

What really drives curiosity is most likely intrinsically driven. These internal drivers are potential novel experiences, urge for variation, change of current state etc. Two models make distinction between two types of curiosity. First model is called EAP (exploratory acquisition of products) and the second model is called EIS (exploratory information seeking). EAP states that certain consumers have tendencies for sensory product experiences while EIS states that consumers tend to seek product information. Therefore, EIS elicits seek for missing information of the story (Baumgartner & Steenkamp, 1996).

Personality researchers have identified individual differences in regards to information exploration (Litman & Jimerson, 2004). Therefore, these individual differences can be the reason to either higher or lower levels of curiosity. Individuals who are high on curiosity levels, have a high emotional motivation for interest and find pleasure in learning (Litman, 2005). Thus, investors who score high on EIS or EC (epistemic curiosity) will be more strongly influenced by curiosity stories, rather than people who are low on curiosity trait. The curious individuals will find the curiosity stories more enjoyable and satisfactory first by evoking curiosity, and later by satisfying their need of learning the new information. (Litman & Spielberger, 2003). Thus:

**H6:** The effect of curiosity story structure on willingness to invest will be positively moderated by higher levels of ECPT (epistemic curiosity personality trait) of investors.

In sum, surprise, curiosity and suspense are all different emotions and act differently on cognitive level. Since surprise is evoked due to unexpected events, need for closure makes

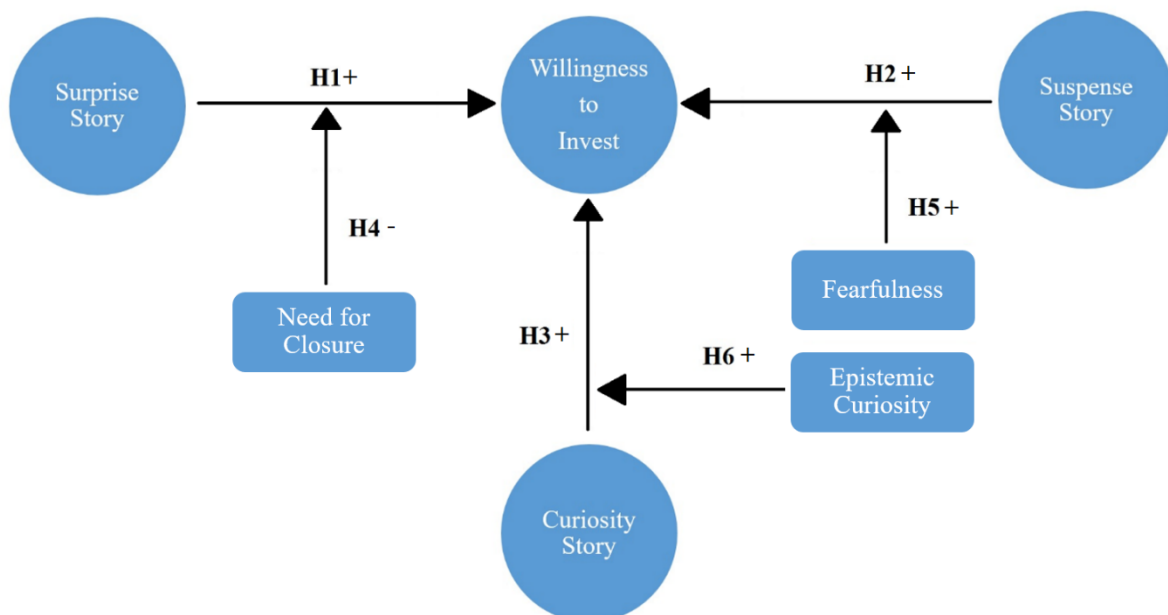
unexpected events seem less unexpected, and therefore less surprising. Need for closure should not affect suspense and curiosity, because suspense involves anticipation of either good (hope) or bad outcomes, while curiosity is just a motivations or propensity to learn new information.

Suspense is generated through the emotions of hope or fear. Either hopeful or fearful personalities will moderate the levels of suspense. However, they will not have the same effect on surprise and curiosity, because surprise is caused by unexpected events and not by anticipated events, while curiosity is the type of need for learning new information.

Finally, curiosity evoking stories are most likely to affect individuals who are curious and motivated or willing to learn new information and experiences. Epistemic curiosity does not involve emotions of fear or hope which is the case of suspense. Similarly, it does not relate to surprise because epistemic curiosity is just a willing and conscious motivation and pleasure in learning new information, while surprise is a quick and automatic process as a response to an unexpected schema.

The conceptual model from figure 1 one sums up our hypothesis and explains the impact of story structure on willingness to invest, including the effect of moderating variables.

**Figure 1**  
Effect of Story Structure on Willingness to Invest and the Impact of Moderators



### 3. Methodology

We used a 4 (story structure) x 2 (project type) between-subject cross-sectional design. Story structure has four levels (curiosity, suspense, surprise and no story) while project type has two levels (fashion and photography). Each participant was part of one condition. Therefore, this study was a between subjects.

We decided to use two types of crowdfunding projects to find out how robust our study was, and whether the theory can be applied to more than one project or does it vary across different types of projects. The two project types (i.e. fashion and photography), belong to different categories, therefore we wanted to test if the relationship applies for both.

#### 3.1 Participants and Data Collection

147 participants were obtained from Amazon Mechanical Turk where each participant was paid \$0.5 per person. 149 participants were obtained from Freelancer.com for €0.80 per person. Therefore, 351 respondents started our study in total. However, 55 participants were excluded from the study. 19 participants did not complete the survey, 28 failed the attention checks and 8 were under aged (under 18 years of age). Consequently, and after revising the data, there were 296 valid participants (N = 296, Age = 33.40, Gender = 54% males and 46% females).

The participant demographics were diverse, and consisted of people from different nationalities. In regards to participant profiles, only two conditions were that they had to be 18 years old or older and that they spoke fluent English, in order for them to fully understand the stories. The summary of the participants' data per condition is in table 1.

**Table 1**  
Participant Data

<i>Condition</i>	<i>Sample Size (N)</i>	<i>Males (%)</i>	<i>Females (%)</i>	<i>Mean Age</i>
Condition 1	31	68%	32%	33.06
Condition 2	34	53%	47%	33.38
Condition 3	43	58%	42%	31.84
Condition 4	40	55%	45%	34.53
Condition 5	38	55%	45%	34.34
Condition 6	39	51%	49%	31.05
Condition 7	34	44%	56%	36.09
Condition 8	37	49%	51%	33.32
Total	296	54%	46%	33.40

### 3.2 Procedure

Participants were told that they were participating in a survey regarding investment. Therefore, they were instructed to think and act as real crowdfunding investors. After the brief intro, they were presented with a hypothetical crowdfunding project. Each group saw either a fashion or photography project. The projects' visual format and design was adopted from Kickstarter in order to provide external validity and credibility. Within each project, the project's story was manipulated in a way that participant either saw one of the three types of stories (surprise, suspense or curiosity) or no story at all, while all other things were kept the same. Those participants who received a project with a story were asked to read the story carefully. The crowdfunding project and the stories are depicted in the appendix 2.

After they saw the crowdfunding project, they were asked to fill out the survey. The questionnaire was designed in Qualtrics program, including the anonymous link which was posted either on Amazon Mechanical Turk or given to the freelancers.

### 3.3 Measurements

The survey included one question for measuring the dependent variable, and questions for measuring the attention checks, moderating variables and control variables. The measurement scales are found in appendix 3.

#### 3.3.1 *The Dependent Variable*

For measuring the dependent variable (willingness to invest) we used the Denison (2009) scale. In the Denison (2009) RCP or recommendation to continue or undertake a project was measured on a 101-point likelihood scale where 0 = not at all likely and 100 = extremely likely. We adjusted this format from 101-point scale to a 5-point likelihood scale where 1 = extremely likely and 5 = extremely unlikely. Furthermore, instead of asking about the participants about the likelihood of undertaking the project, we asked them about the likelihood of investing in the project.

#### 3.3.2 *Attention Checks*

For the attention check, we asked two questions to verify whether the participants paid any attention toward the stimuli, especially the story which was inserted in the project. This



allowed us to see whether their responses are and reliable for further analysis. We asked the participants to state the name of the main story character and the name of the project. Based on this criteria, we eliminated 28 participants from the study.

### *3.3.3 Moderating and Control Variables*

We measured need for closure by using the Roets and Van Hiel (2011) scale. Since need for closure consists of several factors, we chose the factor which measures predictability. The scale is a 5-point Likert scale, where 1 = completely agree and 5 = completely disagree. Therefore, we asked the participants whether they like or dislike unexpected behavior.

We measured fearfulness by using the Ashton and Lee (2009) scale. The scale is a 5-point Likert scale where 1 = strongly agree and 5 = strongly disagree.

For measuring the epistemic curiosity, we used the Litman and Spielberger (2003) scale. The scale is a 4-point scale where 1 = almost always and 4 = almost never.

We used three control variables to find out whether there are any other drivers of willingness to invest in crowdfunding projects. The control variables we used are age, gender and level of lay rationality. We opted for age and gender as they are the usual control variables used in prior research.

We decided to measure lay rationalism in a financial context. In other words, it measures whether the participants are willing to pay lower prices and also whether they rely either on reason or feeling when spending money. In context of crowdfunding it could mean that participants who score high on lay rationalism are willing to invest money only to projects which they feel are either not very costly or seem obviously worth investing in. Lay rationalism was measured by the Hsee, Yang, Zheng and Wang (2014) scale. We used a 5-point scale where 1 = strongly agree and 5 = strongly agree.

## 4. Results

The summary of the descriptive statistics is found in table 2.

**Table 2**  
Descriptives

<i>Variable</i>	<i>Surprise Story</i>		<i>Suspense Story</i>		<i>Curiosity Story</i>		<i>No Story</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Investment Likelihood	2.80	1.32	2.74	1.40	2.99	1.30	2.69	1.24
Need for Closure	2.48	1.04	2.44	1.04	2.51	0.95	2.53	1.11
Fearfulness	2.88	1.24	2.78	1.07	2.51	1.15	2.73	1.10
Epistemic Curiosity	1.75	0.74	1.63	.66	1.63	.87	1.71	0.81
Lay Rationality	1.86	0.73	1.95	.86	1.91	.96	1.95	0.94

**Note:** M denotes mean and SD denotes standard deviation.

### 4.1 The Relationship between Different Story Types and Willingness to Invest

A multiple linear regression was performed to predict how different story types predict investment likelihood. Furthermore, other variables were added to the regression in order to find out if they increase the variability in the results of investment likelihood. Therefore, we first ran a regression with two models. The first model included only the three story types, while the second model included the three story types as well as all the other variables.

We used the following variables and their coding: surprise story (1 = surprise story, 0 = other), suspense story (1 = suspense story, 0 = other), curiosity story (1 = curiosity story, 0 = other), channel (1 = amazon, 0 = freelancer), project (1 = photography, 0 = fashion), need for closure (1 = strongly agree, 0 = strongly disagree), fearfulness (1 = strongly agree, 5 = strongly disagree), epistemic curiosity (1 = strongly agree, 5 = strongly disagree), lay rationality (1 = strongly agree, 5 = strongly disagree), age and gender (1 = male, 0 = female).

Note that channel variable represents the channel from which we collected our data responses. In other words, amazon means that responses were collected from Amazon Mechanical Turk, while freelancer means that responses were collected from Freelancer.com website. Additionally, it is important to note that willingness to invest, need for closure, fearfulness, epistemic curiosity and lay ration are coded with 1 = strongly agree and 5 = strongly disagree. Therefore, the interpretation of the results depends on this style of coding.

The regression equation for the first model was found to be insignificant, ( $f(3,290) = 0.699$ ,  $p = 0.553$ ,  $R^2 = 0.007$ ). The relationship between surprise story and willingness to

invest was insignificant ( $b = 0.061$ ,  $p = 0.781$ ). Similarly, suspense story did not significantly predict investment likelihood, ( $b = 0.033$ ,  $p = 0.879$ ). Finally, the relationship between curiosity story and investment likelihood was insignificant as well ( $b = 0.280$ ,  $p = 0.193$ ).

However, the regression equation for the second model was found to be significant ( $f(11,282) = 2.183$ ,  $p = 0.015$ ,  $R^2 = 0.078$ ). Furthermore, the change in  $R^2$  was found to be significant as well ( $R^2_{\text{change}} = 0.071$ ,  $p = 0.007$ ). It was found that need for closure significantly predicted investment likelihood at a 95% confidence level ( $b = 0.167$ ,  $t = 2.213$ ,  $p = 0.032$ ). Similarly, gender significantly impacted willingness to invest at a 95% confidence level ( $b = -0.349$ ,  $t = -2.154$ ,  $p = 0.028$ ). Furthermore, project type had a significant impact on willingness to invest, but only if 90% confidence level was considered ( $b = 0.288$ ,  $p = 0.066$ ). Similarly, age impacted willingness to invest significantly at 90% confidence level ( $b = 0.015$ ,  $p = 0.052$ ).

Thus, the participants who scored low on need for closure showed a lower likelihood to invest in crowdfunding projects.<sup>1</sup> Furthermore, males were less likely than females to invest in crowdfunding projects.<sup>2</sup> Moreover, we found that crowdfunders were more likely to invest in fashion projects than in the photography project.<sup>3</sup> Finally, the older the participants were, the less likely they were willing to invest in crowdfunding projects.<sup>4</sup>

## 4.2 The Impact of Moderators on The Relationship between Different Story Types and Willingness to Invest

To test the moderation effect, we added three additional models to the first two models we used previously. The third model had an interaction between surprise story and need for closure added. The fourth model had additionally the interaction effect of suspense story and fearfulness. Finally, the fifth model had the interaction effect of curiosity story and epistemic curiosity.

The regression equation of the third model was significant ( $f(12,281) = 2.264$ ,  $p = 0.009$ ,  $R^2 = 0.088$ ). The  $R^2$  change was significant, but only at the 90% confidence level ( $R^2_{\text{change}} = 0.010$ ,  $p = 0.085$ ). Surprise story ( $b = -0.695$ ,  $p = 0.153$ ) and need for closure ( $b =$

<sup>1</sup> A positive  $b$  coefficient means decrease in willingness to invest, because willingness to invest was coded with 1 = strongly agree and 5 = strongly disagree, but due to decrease in need for closure, which is coded in the same manner.

<sup>2</sup> A positive  $b$  coefficient for males, the reason why the willingness to invest was lower was because willingness to invest was coded with 1 = strongly agree and 5 = strongly disagree.

<sup>3</sup> A positive  $b$  coefficient for photography project means decrease in willingness to invest, because willingness to invest was coded with 1 = strongly agree and 5 = strongly disagree.

<sup>4</sup> A positive  $b$  coefficient for males means decrease in willingness to invest, because willingness to invest was coded with 1 = strongly agree and 5 = strongly disagree.

0.099,  $p = 0.257$ ) were both insignificant. However, the interaction between surprise story and need for closure ( $b = 0.302$ ,  $p = 0.085$ ) was significant, although this significance was at a 90% confidence level. This means when the need for closure decreases, the willingness to invest decreases as well.

The regression equation of the fourth model was significant ( $f(13,280) = 2.102$ ,  $p = 0.014$ ,  $R^2 = 0.089$ ), but the  $R^2$  change was insignificant ( $R^2_{\text{change}} = 0.001$ ,  $p = 0.631$ ). Suspense story ( $b = -0.117$ ,  $p = 0.816$ ), fearfulness ( $b = 0.004$ ,  $p = 0.961$ ) and the interaction between suspense story and fearfulness ( $b = 0.079$ ,  $p = 0.631$ ) were all insignificant. Thus, there was no moderation effect of fearfulness on the relationship between suspense story and willingness to invest.

The regression equation of the fifth model was significant ( $f(14,279) = 2.266$ ,  $p = 0.006$ ,  $R^2 = 0.102$ ), as well as the  $R^2$  change ( $R^2_{\text{change}} = 0.013$ ,  $p = 0.044$ ). Curiosity story ( $b = -1.013$ ,  $p = 0.013$ ), epistemic curiosity ( $b = 0.263$ ,  $p = 0.038$ ) and their interaction ( $b = -0.424$ ,  $p = 0.044$ ) were all significant. Thus, the lower the epistemic curiosity, the more the positive impacted of curiosity story on willingness to invest.

After obtaining the results for all of the five regression models, we accepted the third and rejected all the rest hypothesis. Although, we predicted that surprise and suspense story will increase willingness to invest, the results did not confirm that. However, we predicted that curiosity story will increase willingness to invest, we found that it does impact willingness to invest, although only for certain personality types. In other words, people who had less curiosity were more likely to invest.<sup>5</sup>

Moreover, we predicted that need for closure will decrease the effect of surprise story on willingness to invest, but we did not find that. It seems that the lower the levels of need for closure, the lower the investment likelihood of surprise stories<sup>6</sup>. Similarly, we predicted that higher levels of epistemic curiosity should increase willingness to invest when curiosity story was used, but we found that lower levels of epistemic curiosity increase willingness to invest.<sup>7</sup> Finally, the results showed that fearfulness does neither increase nor decrease the effect of suspense story on willingness to invest.

The summary of the results for testing hypothesis one to six is in table 3.

<sup>5</sup> A positive  $b$  coefficient means decrease in willingness to invest, because willingness to invest is coded as 1 = strongly agree and 5 = strongly disagree.

<sup>6</sup> A positive  $b$  coefficient means decrease in willingness to invest, because both willingness to invest and need for closure are coded as 1 = strongly agree and 5 = strongly disagree.

<sup>7</sup> A negative  $b$  coefficient means increase in willingness to invest, because willingness to invest is coded as 1 = strongly agree and 5 = strongly disagree.

**Table 3**  
The Relationship between Different Story Types and Willingness to Invest

Variable	M1		M2		M3		M4		M5	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
Surprise Story	0.061	0.781	0.056	0.796	-0.695	0.153	-0.718	0.143	-0.706	0.147
Suspense Story	0.033	0.879	0.107	0.618	0.102	0.632	-0.117	0.816	-0.095	0.850
Curiosity Story	0.280	0.193	0.320	0.131	0.314	0.138	0.309	0.144	1.013	0.013**
Channel			-0.172	0.273	-0.146	0.352	-0.142	0.368	-0.154	0.352
Project			0.288	0.066*	0.313	0.046**	0.318	0.043**	0.333	0.034**
Need for Closure			0.167	0.032**	0.099	0.257	0.094	0.282	0.080	0.361
Fearfulness			0.024	0.737	0.021	0.765	0.004	0.961	0.017	0.831
Epistemic Curiosity			0.128	0.242	0.131	0.226	0.131	0.227	0.263	0.038**
Lay Rationality			-0.003	0.974	-0.010	0.919	-0.005	0.959	0.015	0.880
Age			0.015	0.052*	0.015	0.051*	0.016	0.047**	0.017	0.032**
Gender			0.349	0.028**	0.360	0.023**	0.362	0.022**	0.364	0.021**
SurpriseStory*Closure					0.302	0.085*	0.312	0.077*	0.306	0.082*
SuspenseStory*Fearfulness							0.079	0.631	0.076	0.645
CuriosityStory*Curiosity									-0.424	0.044**

**Note:** *Surprise Story* had 1 for each participant who saw a surprise story, and 0 for the rest; *Suspense Story* had 1 for each participant who saw a suspense story, and 0 for the rest; *Curiosity Story* had 1 for each participant who saw a curiosity story, and 0 for the rest; *Channel* had 1 for each participant who was obtained from Amazon and 0 otherwise; *Project* had 1 for each participant who saw a photography project and 0 otherwise; *Gender* had 1 for each participant who was male and 0 for female.

\*\* Shows a significance level at 95%, and \* shows a significance level at 90%.

### 4.3 The Impact of Lay Rationality on The Relationship between Investment Likelihood and Different Story Types

We used lay rationality to find out if it has a moderating effect on the relationship between three story types and willingness to invest. We added models six, seven and eight on the previous models.

The regression equation of the sixth model was significant ( $f(12,281) = 2.188$ ,  $p = 0.012$ ,  $R^2 = 0.085$ ). However, the  $R^2$  change was insignificant ( $R^2_{\text{change}} = 0.002$ ,  $p = 0.464$ ). Surprise story ( $b = -0.589$ ,  $p = 0.231$ ), lay rationality ( $b = -0.056$ ,  $p = 0.588$ ) and the interaction between surprise story and lay rationality ( $b = 0.346$ ,  $p = 0.144$ ) were all insignificant. This means that there was no significant moderating effect of lay rationality on surprise story and willingness to invest relationship.

The regression equation of the seventh model was significant ( $f(13,280) = 2.228$ ,  $p = 0.009$ ,  $R^2 = 0.094$ ). However, the  $R^2$  change was insignificant ( $R^2_{\text{change}} = 0.008$ ,  $p = 0.111$ ). Suspense story ( $b = -0.549$ ,  $p = 0.234$ ), lay rationality ( $b = -0.158$ ,  $p = 0.192$ ) and the interaction between surprise story and lay rationality ( $b = 0.336$ ,  $p = 0.111$ ) were all insignificant. This means that there was no significant moderating effect of lay rationality on suspense story and willingness to invest relationship.

The regression equation of the eighth model was significant ( $f(14,270) = 2.062, p = 0.014, R^2 = 0.0094$ ). However, the  $R^2$  change was insignificant ( $R^2_{\text{change}} < 0.001, p = 0.949$ ). Curiosity story ( $b = 0.341, p = 0.484$ ), lay rationality ( $b = -0.151, p = 0.355$ ) and the interaction between surprise story and lay rationality ( $b = -0.014, p = 0.949$ ) were all insignificant. This means that there was no significant moderating effect of lay rationality on curiosity story and willingness to invest relationship.

Thus, we did not find any significant relationship between lay rationality and willingness to invest, and neither did we find any significant moderating effect of lay rationality and different story types. In other words, lay rationality neither increases nor decreases the effect of any story type on willingness to invest.

#### **4.4 The Impact of Age and Gender on The Relationship between Investment Likelihood and Different Story Types**

Furthermore, we added interaction effect of age and gender with each story type to find out if there was any moderation. According to model nine which had the interaction effect of surprise story and age, the regression equation was significant ( $f(12,281) = 2.689, p = 0.002, R^2 = 0.103$ ). Moreover, the  $R^2$  change was significant ( $R^2_{\text{change}} = 0.025, p = 0.006$ ). Surprise story had a significant effect on willingness to invest ( $b = -1.564, p = 0.013$ ), age had an insignificant effect on willingness to invest ( $b = 0.003, p = 0.774$ ), and the interaction between these two variables was significant ( $b = 0.048, p = 0.006$ ). Therefore, we found that surprise story increases willingness to invest when age increases as well.<sup>8</sup> Therefore, our first hypothesis was supported in this case. However, age did not moderate the relationship between suspense or curiosity story and willingness to invest.

Gender did not have a significant moderating effect between any story type and willingness to invest. Furthermore, we included the interactions between project type and three story types, but we did not find any significant moderating effect. Similarly, the interaction of channel and the three story types did not produce any significant moderation.

Additionally, when we included interactions of need for closure and the three story types, we found that beside the surprise story, need for closure had a significant effect on suspense story as well. However, there was no effect of need for closure on the relationship between curiosity story and willingness to invest. Since we already tested the moderation

<sup>8</sup> The reason why negative b coefficient means increase in willingness to invest is because willingness to invest is coded as 1 = strongly agree and 5 = strongly disagree.

effect of need for closure on the relationship between surprise story and willingness to invest, we used the third model. The regression equation of the third model was significant ( $f(12,281) = 2.264, p = 0.009, R^2 = 0.088$ ). Moreover, the  $R^2$  change was significant ( $R^2_{\text{change}} = 0.010, p = 0.085$ ). Surprise story had an insignificant effect on willingness to invest ( $b = -0.695, p = 0.153$ ), need for closure had an insignificant effect on willingness to invest ( $b = 0.099, p = 0.257$ ), but the interaction between these two variables was significant ( $b = 0.302, p = 0.085$ ). Thus, decrease in need for closure results in decrease of willingness to invest.

Furthermore, the model twelve had the interaction of suspense story and need for closure added. Suspense story had a significant effect on willingness to invest ( $b = -0.961, p = 0.050$ ), need for closure had an insignificant effect on willingness to invest ( $b = -0.043, p = 0.683$ ), and the interaction between these two variables was significant ( $b = 0.430, p = 0.017$ ). Therefore, we supported our second hypothesis in the case of interaction of suspense story and need for closure. In other words, the lower the need for closure, the higher the positive impact of suspense story on willingness to invest.

Based on these results, we found that the increase in age increases the effect of surprise stories on willingness to invest. Furthermore, we found that the decrease in need for closure has a positive impact on the effect of suspense story. In other words, the less need for closure, the more they were willing to invest.<sup>9</sup>

## 5. Discussion

Our study was conducted in order to find out whether surprise, suspense and curiosity stories increase willingness to invest in crowdfunding projects. We found support for all of our three hypothesis, but only in certain situations. Surprise story had a positive impact on willingness to invest, but only with older participants. Moreover, we found that suspense story had a positive impact on willingness to invest, but only for people who have lower levels of need for closure. Finally, we found that curiosity story increased willingness to invest, but only for people who had lower levels of epistemic curiosity.

Furthermore, our fourth hypothesis stated that the impact of surprise story on willingness to invest is negatively moderated by need for closure. Although, we found that need for closure moderated the relationship, the moderation was positive. Similarly, our sixth

<sup>9</sup> The reason why negative b coefficient means increase in willingness to invest is because willingness to invest is coded as 1 = strongly agree and 5 = strongly disagree.



hypothesis stated that the impact of curiosity story on willingness to invest will be positively moderated by epistemic curiosity, but we found that the impact of curiosity story on willingness to invest was negatively moderated by epistemic curiosity. Finally, we did not find neither positive nor negative effect of fearfulness on the relationship between suspense story and willingness to invest.

The main reason why we did not support all of our hypothesis might be due to the fact that the effect of stories largely depends on the personality of investors. As mentioned previously, personality is a very important aspect of marketing, based on which target customers are segmented. In the case of surprise story, we found that surprise stories increased willingness, but only for older investors and investors who have lower levels of need for closure. The reason for this might be that surprise story was able to arouse these two type of personalities more than other personality types. Older investors experience surprise differently than younger investors (Schutzwohl & Reisenzein, 1999).

In the case of suspense story, need for closure decreases willingness to invest. Since suspense story follows a normal story sequence, people with need for closure were not able to get aroused by this story type.

Finally, curiosity story increased willingness to invest but only for less curious investors. Curiosity story was able to increase their curiosity, therefore it made the curiosity story more entertaining and more pleasurable.

However, it is important to note that the results could have been different if stories were told using different methods. In other words, we used our stories in a textual format, but audio, video or the combination of these might have had a different impact on the emotional states of investors. Although, each story type produced a specific emotion, the emotions evoked might not have a significant level of arousal. If the story was done verbally, with music, or the combination of both, it could have had a different impact. Moreover, all of our stories had a negative context and atmosphere which can be closely associated with negative emotions or something ominous.

Additionally, our study found that younger participants, as well as females, were more likely to invest in crowdfunding projects. Moreover, participants who had a personality trait of need for closure were more likely to invest in crowdfunding projects. Finally, fashion project had a positive effect on willingness to invest.

Previous studies have not shown a significant difference in age when it comes to investment (Davis & Chen, 2008). However, our study has shown that there is a difference, where younger participants were more likely to invest. A likely explanation for this behavior



is that first of all crowdfunding projects carry less risk. Secondly, older participants might experience arousal emotions differently or less vividly than younger people (Gavazzeni, 2008). This might explain the reason why surprise story positively affects older investors, since surprise stories create arousal quickly.

Why females were willing to invest in crowdfunding projects more than males might be explained by the study done by Bruce and Johnson (1994), where they found that females prefer bets that carry low risks. Furthermore, Graham, Stendardi, Myers and Graham, (2002) found that females prefer investments that have low returns. Since crowdfunding projects carry low-risks and small returns, it is not surprising that females were more likely to invest. However, it is important to note that the mentioned studies showed that males are usually less risk averse than females when making bets, and that females are less confident when it comes to investment decisions, which makes them more hesitant in investment. However, this higher risk averseness and lower confidence was associated with project that had higher risks than the projects we used in our study.

The main reason why need for closure had a positive impact on willingness to invest is most likely because of overconfidence. Overconfidence is mental bias which among its different characteristics, makes certain situations predictable and consequently less risky. Due to this lower pessimism and higher optimism, projects might seem less risky to these types of investors.

Finally, one of the explanations why we found that fashion projects lead to willingness to invest is because these projects are generally more appealing to investors. There several reasons why some projects might be more appealing than other, such as innovativeness, return on investment etc.

## **5.1 Academic and Managerial Implications**

There are several academic and managerial implication which can be taken from this study. First of all, this study can benefit the literature of personality and emotions. We found that certain emotions impact people differently, where this impact largely depends on the personality of people. Therefore, we found that surprise can have an emotional effect on older people. It seems that surprise arouses these individuals more than others, thus it affects them emotionally. Similarly, individuals who have high need for closure seem to be affected by surprise stories, which consequentially leads to emotional and behavioral changes. Moreover, we found that individuals who have a high need for closure seem to be affected by suspense,

but it creates negative emotions. Similarly, individuals who usually are not curious, seem to have a positive affect once they experience curiosity.

Secondly, this study can benefit investment and crowdfunding literature. We found that the success of crowdfunding projects can be improved if either of the three story types are used. Thus, use of storytelling in crowdfunding projects does make sense. However, this success depends on the personality of target investors. Furthermore, we found that project type drives investment likelihood. Thus, investment in crowdfunding projects is driven by things such as the quality, innovativeness, return on investment etc.

Moreover, there are a few implications for business managers who are looking to attract investors, especially in the crowdfunding sector. As mentioned previously, using textual stories in crowdfunding project has a positive impact on investors, but this impact largely depends on the personality of investors.

Therefore, we suggest that managers who decide to get investment funds, and decide to use textual stories, they should carefully assess what their target investors are. Thus, if they decide to start projects which might appeal to older investors, surprise stories might be a good tool for attracting them.

Furthermore, use of suspense stories in crowdfunding projects can increase likelihood. However, managers should avoid using suspense stories if they are looking to start projects that appeal to investors who have high need for closure. Our findings have shown that the lower the levels of need for closure, the higher the willingness to invest when suspense stories were used.

Moreover, if managers decide that they want to use curiosity stories in crowdfunding projects, they might benefit, but only from investors who do not have curious personalities. Therefore, investors who do not have a big desire to seek for new information might like and invest in projects that have a curiosity story.

Furthermore, it seems that females are more likely to invest in crowdfunding projects than males. Thus, managers should consider targeting female investors more than males, especially if the projects are more appealing to females (e.g. projects related to female fashion). Moreover, for attracting female investors, the projects should emphasize that the success rate is high in order for females to have more confidence in those projects, because female investors are more risk averse and prefer safer bets.

However, this does not mean that male investors should be avoided per se, because certain types of projects might be more interesting to male investors (e.g. projects related to cars), because we found that project type drives investment likelihood. Thus, we advise that

managers who want to use crowdfunding as investment mean, should consider critically if their projects make sense or not, because crowdfunders can recognize the difference between a good and a bad project.

Finally, our study found that need for closure has a positive impact on willingness to invest. This is due to the fact that need for closure is one of the manifestations of the hindsight bias, which eventually leads to overconfidence. As previously mentioned, people who like things like control and predictability, would most likely invest in crowdfunding.

## **5.2 Limitations and Future Research**

The major limitation in this study was that we did not have professional investors as participants. Although, ordinary people can act as crowdfunders and they can make investment decisions, they lack experience and expertise which is associated with actual investment. In other words, professional investors can better recognize good from worse projects, because they are more critical in their evaluation approach. Furthermore, the problem with people who make self-assessments whether to invest or not, they do not experience any actual risk of losing money. Therefore, it is difficult to manipulate real-life risk. Thus, any implications of the results we have got might be partially applied to professional investors and mainly used in crowdfunding.

Therefore, future research could use professional investors in order to find what impact storytelling would have. Moreover, it would be interesting to test what are the differences between crowdfunding and other means of investment in regards to use of storytelling persuasion.

Similarly, crowdfunding projects differ from other investment means. Major difference between crowdfunding and other investment means is that crowdfunding requires relatively low investment amounts from each investor. For example, a crowdfunder can invest just a few dollars, while in other investment means an investor would have to invest thousands of dollars. The investment amount can have a significant impact on risk aversion. Large investments have large consequences. In other words, if a large investment is made and the project fails, it means that an investor loses a lot of money. Whereas, the crowdfunder who invests a couple of dollars does not have to worry about what is going to happen with the project, because the consequences of losing a couple of dollars are minor.

Based on this, future research could focus on projects with higher funding from each investor. Since crowdfunding projects carry less risk averseness for investors, future research

could focus on projects with more risk. Therefore, it is very likely that the funding magnitude would affect investment decision significantly. Additionally, researchers could compare how different investment magnitude impacts the decisions of investors.

Moreover, the stories we used were only in a textual format. Although, textual stories can impact the readers emotionally, they need to be relatively long in order for readers to get immersed in the story or connect with the story's characters. However, audio or video stories might produce different results, because they might evoke emotions faster. A narrator of an audio story might manipulate his voice to touch the audience emotionally. Similarly, video stories might use vivid imagery, where audience can clearly see what the story is all about.

The reason why we used textual stories is because they are easiest to make. Making an audio story would require a narrator, preferably a professional, because narrative stories require that a narrator has good vocal and speaking skills. Similarly, video stories would require someone who has sufficient experience in making videos. In other words, we would have to hire a narrator or video designer, but this would be much costlier. The same applies for textual stories. If we hired a professional storyteller, the stories might have produced better results.

Thus, the storytelling method could be done differently. Future research could use textual, audio and video format and compare these to find out which storytelling method is the most effective one. Moreover, some story methods which use vivid images or emotional narration could evoke stronger emotions than the ones used in textual stories.

Finally, this study focused only on three types of storytelling. However, there are so many other types and genres of storytelling. Furthermore, we only tested the impact of storytelling, but there are many other variables that could have been used.

Thus, future studies could focus on other story types instead of using only surprise, suspense and curiosity. For example, researchers can use several different emotions to test their impact on investment or try to compare different genres of stories and their impact on investment. Moreover, Future researchers could test things like culture, complexity of projects, gender-different projects, funding requirement etc. Indeed, there are so many other variables out there in the investment world which either have a positive or negative effect on investment.

# Appendix

## Appendix 1

### Summary of the Review of Literature

<i>Author (s)</i>	<i>Research Question</i>	<i>Research Findings</i>
Achar, Agrawal & Duhachek (2016)	Review of Literature	Emotions can shape decision-making through appraisals
Agrawal (2013)	Observation of crowdfunding patterns	Publishing and music are the most profitable sectors. Most of the projects do not succeed. Local investors get more funds.
Albers-Miller & Stafford (1999)	Review of literature: Does the use of rational and emotional messages depend on culture and product type?	The content of an ad depends on culture. Furthermore, rational appeals are used more frequently for goods. Service appeal requires stronger culture knowledge.
Alwitt (2002)	What are the consumer reactions to suspenseful commercials and how they affect attitude toward ads?	Suspenseful commercial evoke concern for the main character of the commercial and consequently increase attitude towards ads.
Appel & Richter (2007)	Does the fiction story narrative have a long-term psychological impact on belief change of readers?	Belief change caused by fictional narratives was stronger after 2-week period.
Arcidiacono (2011)	Are there differences in biased thinking among different people due to their nationality, age, gender and education?	Critical consumers are not very frequent, this they fall under biases.
Ashton & Lee (2009)	Scale development for six personality traits	The six major personality factors are: honesty-humility, emotionality, extroversion, agreeableness, conscientiousness and openness to experience.
Astrebo & Elhedhli (2006)	Can simple heuristics be used by experts to forecast successful commercialization of early ventures?	Expert forecasts using simple heuristics seem to have a high accuracy in predicting early venture commercialization.
Babin, Darden & Babin (1998)	Are positive and negative emotions independent, distinct or correlated?	Positive and negative emotions are distinct.
Baesler & Burgoon (1994)	Comparison of storytelling, statistical evidence, vividness of	Statistical evidence is more persuasive than story evidence. Vivid evidence is more persuasive than non-vivid evidence. Statistical and vivid evidence were

	the story and time period on persuasion.	persuasive on a long-term, while story was persuasive on a short term.
Baumgartner & Steenkamp (1996)	Creating a conceptual model of consumer exploratory behavior.	Behaviors like risk taking, innovativeness and variety of purchase offer stimulating experiences for consumers. EBBT scale can be used for measuring this behavior.
Bandyopadhyay, Pammi & Srinivasan (2013)	Does emotional expectation affect decision making?	Expectation of positive emotional expectation affects the choice of decisions, like in the case of avoiding regret.
Belleflamme, Lambert & Schwienbacher, (2014)	What are the differences between of pre-ordering and profit sharing types of crowdfunding?	Pre-order financing can be considered a type of bootstrap financing while, profit sharing can be considered a type of friends and family investor group. Crowdfunding revolves itself around funding from the crowd rather than professional investors who have personal links to with entrepreneurs.
Brader (2005)	Does content with strong imagery of success increase the desire to participate and reinforce the salience of past beliefs? Does imagery of threat motivate search for information and decrease the salience of prior beliefs?	Voter who underwent enthusiastic appeals showed more interest in campaigns and willingness to vote. Fear induced ads have a significant impact on information searches, but the recall of ads is not significant.
Breckler & Wiggins (1991)	Relationship between pre-communication attitudes and favorability of cognitive responses	Cognitive responses were related to affective and evaluative pre-communication attitude.
Brewer & Lichtenstein, (1982)	Can story structures of surprise, suspense and curiosity create these same emotions with reader?	Story structure produced affective responses for the readers such as surprise, curiosity and suspense.
Bruce & Johnson (1994)	What are the gender differences in betting behavior?	Men are less risk averse and they are more confident than females when it comes to betting.
Burgdorf, Panksepp & Moskal (2011)	Neuroscientific drivers of positive affect	50 kHz ultrasonic vocalizations reflect a positive affective state in rats. These frequencies boost dopamine inflow for the reward seeking brain regions.
Chen, Duckworthy & Chaiken (1999)	What are the motives behind systematic vs heuristic cognitive processing?	Motives behind heuristic cognition are least effort behavior, perceived material interests, social life protection and others.
Comisky & Bryant (1982)	What is the role of outcome uncertainty and attitude towards the main protagonist in generating suspense?	Suspense is increased when the outcome of the story is uncertain, as well as when the protagonist of the story is liked.

Dane, Rockmann & Pratt (2012)	Is intuition effective for non-decomposable tasks and does a level of expertise improve the effectiveness of intuitive decision making.	Intuition can be used effectively in tasks that are non-decomposable. Furthermore, as the level of expertise increases, intuition becomes more effective.
Davis & Chen (2008)	What are the individual differences in retirement savings and investment decision making?	Demographics such as age and gender have an impact on retirement savings.
De Martino, Kumaran, Seymour & Dolan (2006)	What are the neurobiological basis of the framing effect?	Increased activation in the amygdala was associated with the risk averseness in the gain frame and risk seeking in the loss frame. Conversely, making effort to behave counter to this general behavioral tendency produces increased activity in the ACC region.
Delgadillo & Escalas (2004)	Is word of mouth structured as a story and does the biased memory of story details have an effect on recall on brand attitude.	Word of mouth can be considered to represent a form of storytelling. However, the biased recall of word of mouth has an effect only on short term, but not on long term.
Denning (2006)	Review of literature: How to decide which type of storytelling to choose.	Before deciding which storytelling type to use, business need to decide what purpose they are aiming such as: communicating the identity of the business, improving the B2B activities, sharing expertise etc.
DeSteno, Petty & Rucker (2004)	Is persuasion increased when the audience's emotional state is matched with the emotional tone of the story's message?	Persuasion increases when the emotional frame of the story's message is matched to the audience's emotional state.
Doskeland, Jacob & Pedersen (2015)	How wealth concerns and moral concerns influence the investor's levels of responsibility when investing.	Investors that belong to economic frame seemed to invest more responsibly than the investors who belonged to the moral frame.
Ekman, Levenson & Friesen (1983)	What are the autonomic nervous system facial and behavioral reactions for basic emotions?	Autonomic activity proved to be different among basic emotions.
Escalas & Stern (2003)	What are the differences in experience of sympathy and empathy to drama commercials?	Classical dramas can generate higher level of sympathy and empathy than vignettes.
Escalas (2004)	By what mechanism(s) does mental simulation enhance persuasion?	Mental simulation has a significant impact on attitudes toward an ad. Simulation leads to thought structure, which in turn has a positive effect on attitude toward the ad and intentions toward the brand. Mental involvement becomes less critical due to transportation.
Escalas (2007)	How analytical vs. narrative self-referencing persuades?	Narrative processing persuades through transportation, therefore it works both for strong and weak arguments. Analytical processing persuades only with strong arguments. Finally, sceptical ad processing persuades only through strength of arguments.



Fenger, Aschemann-Witzel, Hansen & Grunert (2015)	Can storytelling labelled with new meat products cause more interested with less consumers who are usually less interested in those products?	Consumers with lower level of interest for new meat products were influenced by storytelling in a way that they showed higher preference for those products.
Fontaine, Scherer, Roesch & Ellsworth, (2007)	Are there more than two dimensions of emotions and if yes, which are they?	There are four dimensions of emotions, and they are: evaluation-pleasantness, potency-control, activation-arousal and unpredictability
Fried & Hisrich (1994)	What is the model of investor decision making process?	Venture capital investment process has the following sequence: investment proposal, origination, firm-specific screening, generic screening, first phase evaluation, second phase evaluation and closing.
Fryer (2003)	An HBR article: How can people be persuaded through narratives?	Narratives can reach emotional level of consumers or/and unite emotions with thoughts, which makes them more persuading than just using conventional rhetoric (e.g. power point slides)
Graham, Stendardi, Myers & Graham (2002)	What are gender differences in investment strategy?	Males are less risk averse and more confident than females.
Green and Brock (2000)	What is the effect of story transportation on attitude toward the story's character? How framing affects transportation? Can stories change beliefs?	Story transportation had a positive effect on the attitude towards story's protagonist. Framing and instructions can lower the impact of transportation. Stories can change belief to some extent.
Hamann & Canli (2004)	What are the correlations between individual differences in experiencing emotions and activation of brain regions?	Individuals who had prolonged experience of negative emotions had the highest activities in the amygdala region of the brain.
Haugtvedt, Petty & Cacioppo (1992)	What is the role of need for cognition on attitude, in regards to ad exposure?	People who had low need for cognition were more impacted by the attractiveness of endorsers, while the people who had high need for cognition were less affected.
Herzenstein, Sonenshein & Dholakia (2011)	To what extent do number of identity claims and their content influence loan funding and reduction of interest rate?	The number of identities that borrowers claim in their narratives positively affects both loan funding and reduction in interest rate.
Hill, Fombelle & Sirianni (2015)	How can companies motivate consumer purchasing behavior by using curiosity?	Consumers who were exposed to products which elicit curiosity, showed an increased motivation to purchase products.
Hoeken & van Vliet (2000)	What affect is of changing the place of the outcome of the story on the attitude toward that story?	Story creates the same affection, whether its outcome is known or unknown. Story is better supported when it contains surprise, compared to story without a surprise.



Holmes & Crocker (1987)	How do consumers react in regards to rational vs. emotional appeals when the products require either high or low involvement?	Rational appeals are more suited for high involvement products, while emotional appeals are better suited for low involvement products.
Hsu, Liang & Tien (2005)	What are the factors that influence willingness to donate money (based on research in Taiwan)?	Things which drive donations are quality of information about donations, the reputation of charity organizations, advertising.
Hutter & Hoffman (2014)	What is the impact of surprising ambient media on attitude toward ads and sales?	Surprising ambient media intensifies attitude towards ads and consequently increases sales.
Johar & Sirgy (1991)	What model can be used to explain the differences between value expressive and utilitarian products appeals?	For utilitarian products, utilitarian appeals are more effective. For value expressive products, appeals that are value expressive are more effective.
Johnson & Mandler (1980)	What re the recurring story structure formats that are used in stories?	Base and transformational rules are used to characterize stories and to preserve meaning.
Kahneman & Riepe (1998)	What are the cognitive errors which affect the investors' decision making?	There are several cognitive errors which increase proneness to poor investment decisions such as: overconfidence, hindsight bias, overreaction to chance events, non-linear weights of probabilities etc.
Kahneman & Tversky (1974)	How do people assess the probability of events to occur?	People use heuristics such as availability bias or anchoring to assess probabilities and understanding of events in order to avoid heavy cognitive processing.
Kahneman & Tversky (1981)	What are the ways people violate the rules of rationality such as coherence and consistency when making decisions?	Violation of consistency can be explained through framing and non-linearity in assigning importance of decisions.
Kashdan, Rose & Finchman (2004)	What are the specific and diverse components of curiosity and how to measure it?	Curiosity is an emotional system which is closely linked to pursuit and exploration of information and challenge. A measure of curiosity is also developed.
Kuppens, Stouten & Mesquita (2009)	How differences in personality are reflected in the differences of emotional experience?	A same emotion might be triggered by different events for different individuals. Furthermore, the duration of experience of emotions differs based on personalities.
Kuppuswamy & Bayus (2015)	In what periods of a funding cycle do projects get funded mostly?	Projects get more backer funding in the beginning and ending weeks of a funding cycle. There is a slowdown of funding in the middle of the funding cycle. Also backers drop off after the initial funding goal is reached.
Lantos & Cranton (2012)	What is the conceptual model used to understand consumer response to music?	The model explains that using music to impact consumers depends on the context of the situation, the mean of music, the consumer personal profiles and consumer's attitude towards ads.

Laros & Steenkamp (2003)	What are the characteristics and hierarchy of positive and negative emotions?	Basic positive emotions are contentment, happiness, love, and pride, while basic negative emotions are sadness, fear, anger, and shame.
Lien & Chen (2013)	How does the consumers' processing of narrative ads work and what are the mediating processes of ads?	Ads which contain stories make consumers affected by the story rather than the strength of ad arguments. Narrative ads are mediated by verbal-narrative ads, but not by visual-narrative ads.
Litman (2005)	What is the model which can explain curiosity and its link to motivational drivers like the liking and wanting?	Interest-deprivation model explains that curiosity is based on as interest in learning something new. Curiosity is closely linked to liking and wanting, because these two cognitive mechanism are strong motivators.
Litman & Jimerson (2004)	How to measure curiosity as a feeling of deprivation?	Three main factor for measuring curiosity as a feeling of deprivation are need for competence, intolerance for inaccessible information and motivation for problem solving due to feeling of tension.
Litman & Spielberger (2003)	How to measure epistemic curiosity?	According to interest deprivation model, curiosity can be either reductive or inductive. A scale is provided.
Loewenstein (1994)	Review of literature about curiosity, with a focus on the definition, causes, voluntary reasons to exposure of curiosity and context.	Curiosity is an intrinsically driven desire and need to gain new information or experience. When curiosity is not satisfied, it is followed by arousal of a negative valence. People voluntarily look for moderate levels of curiosity experiences.
Lorini & Castelfranchi (2007)	What are different forms of surprise?	There are two main forms of surprise, and they are mismatch based surprise and astonishment.
MacKenzie, Lutz & Belch (1986)	What is the model that can explain the relationship between attitude toward ads and other measures?	Dual mediating hypothesis is the strongest model which explains how attitude towards ads influences attitudes toward brands in a mediating relationship. Other three models are also discussed.
Maguire, Maguire & Keane (2011)	How outcomes have different effects on levels of surprise depending on the situation.	Surprise can be explained through the probability of outcomes, where low probability outcomes seem less surprising. Furthermore, surprise increases arousal due to inconsistencies, and motivates people to resolve those inconsistencies.
Maio & Esses (2001)	How to measure need for affect and how is it related to individual differences?	Need for affect is positively related to willingness to experience emotions, and negatively related to alexithymia. However, individuals who are high on need for affect show the need to experience positive emotions, but not the negative.
Mehta & Purvis (2006)	What is the role of recall and emotion in advertising?	Recall and emotion are interconnected constructs, and either used together or separately they produce positive impact on ad linking.

Mellers (2013)	What is the effect of surprise on decision making?	Surprise links cognitive and emotional processes. It intensifies emotions and its effect depends on mental errors or the influence of culture.
Menon & Soman (2002)	Do curiosity-generating online ads increase effectiveness?	Online ads that create curiosity with the audience increase interest toward products, learning of those products and better product evaluation.
Mollick (2014)	What are some of the analytical insights which explain how crowdfunding works (based on Kickstarter)?	Project succeed by smaller margins, but usually fail by big margins. Quality of preparation and geographical location impact the success rate of projects.
Mollick & Nanda (2015)	Are crowdfunding & expert investment decisions congruent?	There is a congruence between the funding done by crowds and the evaluation of those projects by experts.
Moulard, Kroff & Folse (2012)	What is the conceptual model that explains suspense in terms of consumption experience?	Hope and fear are two major components of suspense. Approach appraisal impacts hope, while avoidance appraisal impacts fear. Probability fluctuations have an effect on outcome uncertainty, and outcome uncertainty has an effect on both hope and fear.
Niepel (1994)	What is the behavioral component of surprise, which represented by a halt of current behavior and focus on the stimulus of surprise?	Recall of schema-discrepant words and the stimuli which create surprise was higher in the experimental condition compared to the control.
Petty & Cacioppo (1986)	What is the model which can explain, organize and categorize the basic processes of persuasion in human communication?	Two basic routes of persuasion are central and peripheral. Central route occurs when elaboration likelihood is high, while peripheral route occurs when elaboration likelihood is low.
Rapp & Gerrig (2006)	To what extent do readers' preferences affect their expectations of the outcome of a story's character?	Readers were more likely to accept outcomes which had a prior likelihood. When readers' preferences and likelihood were conflicted, readers accepted less outcomes.
Reisenzein, Meyer & Niepel (2012)	What is surprise and how does it manifest itself?	Surprise is an emotion or cognitive state, which manifests itself behaviourally through facial and/or verbal reactions, as well as cognitively in increasing attention towards a stimulus. It is usually caused by unexpected events or schemata discrepancy.
Roese & Vohs (2012)	What is hindsight bias and how it works?	Hindsight bias is a cognitive error where events seem more predictable only after they have occurred. Hindsight bias can manifest itself through three levels: memory distortion, belief on inevitability and belief of foreseeability.
Roets & Van Hiel (2011)	How to measure need for closure?	5 main items that measure need for closure are: order, predictability, decisiveness, ambiguity and closed-mindedness.

Schutzwahl & Reisenzein (1999)	What are the differences in experiencing surprise for older vs. younger people?	Seniors need a longer time period to respond to schema discrepant event compared to younger people.
Schwienbacher & Larralde (2010)	How can crowdfunding be used for financing small business ventures?	Crowdfunding can be used to raise relatively lower amounts of capital, introduce creative projects, make crowdfunders involved in projects and create a functional communication system between crowdfunders and project creators.
Shaouf, Lu & Li (2016)	Does web advertising visual design have a positive impact on attitude toward the brand, the ad and purchase intentions? What is the role of gender?	Visual web design does positively affect the attitude toward the brand and the ad. The purchase intention is moderated by gender.
Sojka & Giese (2001)	What are the individual differences in processing visual vs verbal information?	Individuals with high need for cognition and low need for affect prefer to process verbal information. On the other hand, individuals with low need for cognition and high need for affect prefer processing visual information.
Vanhamme (2000)	What is the impact of surprise on satisfaction?	The results showed that surprise can have a bi-polar effect on satisfaction, ranging from decrease in satisfaction to increase in satisfaction.
Watts (1973)	Does high vs low intelligence have a stronger impact on opinion change?	There was a partial correlation between higher intelligence argumentation and opinion change.
Webster & Kruglanski (1994)	What are the individual differences in need for closure and how to measure them?	There are five ways in which need for closure can manifest itself through, and they are: order and structure, discomfort and ambiguity, urgency in striving for decision making, predictability and close-mindedness.
Woodside, Sood & Miller (2008)	What is the theoretical background of consumer-brands storytelling?	Consumers use brands similarly as the use humans in how they formulate stories about their relationships.

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## Appendix 2

Before you start with the questionnaire, imagine that you are an investor, and you decided that it might be good idea to invest in crowdfunding projects. You found a project (below) and decided to take a look at it. Please look carefully at the below project and read the story mentioned in it.

### Using Photography to Keep the Nature Safe



**0**  
Investors

**\$0**  
Pledged

**\$7,000**  
Funding goal

**30**  
Days to go

Back This Project

### Project Description

*The goal:* The main goal of our project is to create a professional photography album of nature. The album would be used as a mean for awakening consciousness of environmental protection within the authorities and among ordinary people. In order to do this, we would require funding to purchase the professional photography equipment, as well as to fund other activities related to the project.

*The outcome:* If we succeed to meet our funding goal, we would be able to create a photography album which would serve a purpose of awakening the consciousness of people to be more responsible towards the nature and our environment.

*The reward:* 70% of the project's net revenue will be funded to us, while the rest 30% of the revenue will be spread out to donors based on how much everyone has invested.

*The costs:* The costs of this project are costs required for purchasing the equipment like the camera, lenses, battery, travel costs, accommodation costs etc. The total cost of this project is \$7,000. Each donor should contribute at least \$10.

### **Surprise Story**

One day, John went for a walk in the woods. Since it was a warm and sunny day, John planned to visit a nearby lake, which was at the end of the forest. The nature in the woods was beautiful and he could hear the birds singing their beautiful songs.

Suddenly John got shot! He fell on the ground, showing no signs of life. He woke up, just to see that he is laying in a hospital bed. The doctor told him he was shot in the back by an illegal hunter. However, first aid came on time, thus he was very lucky to stay alive.

### **Suspense Story**

One day, John went for a walk in the woods. Since it was a warm and sunny day, John decided to visit a nearby lake, which was at the end of the forest. The nature in the forest was beautiful and he could hear the birds singing their beautiful songs.

While he was walking he thought he heard a gunshot, which made him a bit suspicious. Then, he heard another shot, and he was sure that it was a gunshot. It made him scared. His palms started sweating and his heart started beating faster and faster. After the third shot, a bullet just missed him. He realized that he was the aim! He panicked and started running as quickly as he can. When he heard the lost shot, the bullet had already struck him. He fell on the ground, showing no signs of life.

The people who shot ran towards him. When they approached him, they realized they made a huge mistake. They mistook him for an animal. They called an ambulance, which immediately came and took him to the nearest hospital. The doctors tried hard to save his life. Eventually, they managed to sooth the wound. The people who shot were illegal hunters. He was very lucky to stay alive.



### Curiosity Story

John got shot and he fell on the ground, showing no signs of life!

The ambulance received a phone call, and they were informed that a man was shot, therefore they should come as soon as possible. The ambulance reacted quickly and sent the ambulance which took him to the hospital. The doctors worked hard to get him back to life, and eventually he woke up. A police officer asked him to try to remember of what actually happened. He said he was going for a walk and he heard gun shots. He tried to run away, but then he just fell on the ground, and could not remember anything afterwards. After a couple of hours, the same policeman approached John and informed him that the bullets that struck him belonged to some illegal hunters.

### Winter Clothes for Household and Stray Dogs



**0**  
Investors

**\$0**  
Pledged

**\$14,000**  
Funding goal

**30**  
Days to go

[Back This Project](#)

### Project Description

*The goal:* The goal of this crowdfunding project is to collect funds in order to create special type of winter clothes made for dogs. These clothes would be sold to dog owners, while all the unsold items would be given to animal protection organizations, which will in turn use the clothes for stray dogs. It is a novel project which benefits owners due to high quality of clothes, as well as stray dogs which protects them from extreme cold.

*The Outcome:* If we succeed to meet our funding goal, we would sell high quality dog clothing which will serve as a protection from extremely cold weather. With this clothing, the dogs would be kept warm.

*The reward:* 70% of the project's net revenue will be funded to us, while the rest 30% of the revenue will be spread out to donors based on how much everyone has invested.

*The costs:* The costs for this project come exclusively from manufacturing costs for making 1,000 vests. Cost for producing one vest is \$14.6 therefore the total project cost is \$14,600. Each individual investor should contribute at least \$10 for the project.

### **Surprise Story**

Max is a family dog. His owners are very kind and protective. He likes to go outside for a walk or a run with his owners. He also likes to play with the kids from the neighbourhood. Every night he would go to his cosy basket where he would sleep.

One night, Max's lifeless body was found! That cold night, he was playing with some kids from the neighbourhood, but he got lost. He was found in an abandoned building by a group of people who work for animal shelters. He was taken to the veterinary where the veterinarians tried hard to wake him up. Eventually, he woke up and was returned to his owners.

### **Suspense Story**

Max is a family dog. His owners are very kind and protective. He likes to go outside for a walk or a run with his owners. He also likes to play with the kids from the neighbourhood.

One day, Max's owners let him play outside with the kids from the neighbourhood. It was getting late, but Max was still not home. The owners got suspicious, since Max is always home before sunset. They went outside to see if he is still playing with the kids from the neighborhood, but they could not find him there either. At this point they worried that something bad might happen to him. They searched for him in other neighbourhoods and streets. As the night was getting colder and colder, they became extremely worried. The owner's wife started crying and it seemed that Max would not survive the coldness of night.

Next morning, they received a phone call. It was from the animal shelter. They informed the owners that they found Max in an abandoned building, showing no sign of life. However, they took him to the veterinary who worked hard to get him back to life. Eventually, Max woke up, and he was lucky to stay alive.



### **Curiosity Story**

Max's lifeless body was found in an abandoned building.

Max is a family dog, who lives with nice and caring owners. He likes to go outside for a walk or a run with his owners. He also likes to play with the kids from the neighbourhood.

One night, while playing with the kids from the neighbourhood, he got lost and could not find his way back home. He found one abandoned building, where he stayed for the night. Due to the severity of coldness, he lost consciousness and looked like he did not survive. Shortly after that, a group of people who work for an animal shelter found him and took him to the veterinary, where the veterinarians tried to take him back to life. He eventually woke up and his owners came to take him home.

## Appendix 3

### Measurements

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#### *Investment Likelihood*

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**Investment likelihood** (Denison 2009): How likely are you to invest in this crowdfunding project?

Response: 1 = extremely likely, 2 = likely, 3 = neither likely nor unlikely, 4 = unlikely, 5 = extremely unlikely.

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#### *Attention Check*

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**Photography project name:** What is the name of the project?

Response: Introduction of New Chip Technology; Using Photography to Keep the Nature Safe; Using Art to Fight for Human Rights; Writing Stories about Rare Animal Species

**Photography project main character name:** What is the name of the main character?

Response: Samuel; John; Larry; Andy

**Fashion project name:** What is the name of the project?

Response: Introduction of New Chip Technology; Winter Clothes for Household and Stray Dogs; Using Art to Fight for Human Rights; Writing Stories about Rare Animal Species.

**Fashion project main character name:** What is the name of the main character?

Response: Bailey; Charley; Max; Buddy

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#### *Moderating Variables*

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**Need for closure** (Roets & Van Hiel, 2011): I don't like to be with people who are capable of unexpected actions.

Response: 1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree and 5 = strongly disagree

**Fearfulness** (Ashton & Lee, 2009): I would feel afraid if I had to travel in bad weather conditions.

Response: 1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree and 5 = strongly disagree

**Epistemic curiosity** (Litman and Spielberger, 2003): If I read something which puzzles me, then I will keep reading it until I understand it.

Response: 1 = almost always, 2 = often, 3 = sometimes and 4 = almost never

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#### *Control Variables*

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**Age:** Any numerical value

**Gender:** Male or Female

**Lay rationalism** (Hsee, Yang, Zheng & Wang, 2014): When grocery shopping, I compare the prices of different brands to be sure I get the best value for the money.

Responses: 1 = strongly agree, agree, neither agree nor disagree, disagree and strongly disagree.

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