

Buy before it's gone: the moderating effect of scarcity appeals on the relationship between  
dispositional greed and product evaluation

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### Abstract

Greed is an important motivation of money spending behavior. As a consequence it is likely to assume that greed has a positive effect on product evaluation. However, not much research has been done on this topic. The aim of this thesis was to investigate if dispositional greed influences product evaluation, and if scarcity moderates this relationship. Gaining more insight in the way such psychological processes and persuasion techniques interact teaches us more about human decision making processes, which is highly relevant to behavioural scientists who try to alter people's behavior and every day choices in cheaper, less invasive and or more effective ways. The current thesis followed the procedure of Mukherjee & Lee (2016) in order to measure product evaluation, in which participants were exposed to an advertisement and asked to evaluate the advertised product. The dispositional greed scale (DGS) by Seuntjens et al. (2015) was applied to measure individual differences in greed. Results of this thesis found no significant relationship between dispositional greed and product evaluation. Also no relationship between scarcity appeals and product evaluation and no interaction between dispositional greed and scarcity appeals were found. It is important for future research to take the concepts of attitude strength, cognitive load and expectation into consideration.

### **Introduction**

Black Friday; the day passionate shoppers line up in front of stores hours before they open up. The day ordinary people turn into dangerous customers by yelling at employees, getting into physical fights with fellow customers and stealing product from other shopping carts. The quick-tempered emotions and consumer misbehavior are derived from scarcity. Black Friday is designed to offer limited amounts of products for a limited amount of time to make consumers feel that a product is scarce. This example indicates a situation when scarcity induces greed.

Greed as a dispositional attribute is rather stable within individuals: individuals differ much in their extend of greediness (Krekels & Pandelaere, 2015). For example: men are generally thought to be greedier than women, bankers are thought to be greedier than teachers and adolescents are thought to be greedier than older individuals. We often tend to think of greed as a personality trait, however, as shown in the example above, greed is also likely to be induced by situational incentives such as scarcity. Advertisers have long used scarcity appeals as an attempt to create situations that evoke greedy behavior and increase consumers' product evaluations accordingly (Mukherjee & Lee, 2016). However, we do not know to what extend scarcity appeals moderate the relationship between dispositional greed and product evaluation. Gaining more insight in the way psychological processes such as dispositional greed and persuasion techniques, such as scarcity appeals, interact teaches us more about human decision making processes. This is highly relevant to behavioural scientists who try to alter people's behavior and everyday choices in cheaper, less invasive or more effective ways. Therefore, the current thesis extends previous literature by investigating whether the concepts of dispositional greed and scarcity appeals are likely to interact, and whether those concepts positively influence product evaluation. This thesis refers to scarcity appeals instead of scarcity. It is important to

realize that those are two distinct concepts. Where scarcity indicates that something is scarce, scarcity appeals evoke the belief that something is scarce.

Product evaluation is subdivided into attitudes towards the product on the one hand, and perceived quality on the other hand (Mukherjee & Lee, 2016). The definition of attitudes includes that they derive from, or are based on cognitive, affective and behavioral information (Eagly & Chaiken, 1993). Attitudes are known to be powerful predictors of buying decisions (Ajzen, Amherst, & Amherst, 2014). Moreover, perceived quality is based on consumer's attitudes and perceptions towards a product. It does not necessarily refer to actual features and characteristics cannot be objectively determined (Oude Ophuis & Van Trijp, 1995). Instead, perceived quality can be defined as a consumer's opinion about overall quality or superiority of a product with respect to its intended purpose, relative to alternatives (Aaker, 2009).

### **What is dispositional greed?**

Until a few years ago, there was little consensus on how to define greed. This lack of clarity is one of the main reasons why not much research has been done on this topic. Dictionaries describe greed as “the selfish and excessive desire for more of something (as money) than is needed” (Merriam-Webster Online Dictionary, 2013). However, this definition did not seem to be complete. A research of Seuntjens et al.(2014) gave more insight on how to define greed. This study defines greed as “the dissatisfaction of not having enough, combined with the desire to acquire more” (p. 14). People who score high on dispositional greed believe that more of something makes them happier, but as soon as they adapt their desires and expectations, they want even more (Diener, Suh, Lucas, & Smith, 1999). Hence, for greedy people the goals they set keep rising. Individual differences of dispositional greed are captured in the Dispositional Greed Scale (DGS) (Seuntjens, Zeelenberg, van de Ven, & Breugelmans, 2015).

Greed is associated with concepts such as maximizations and materialism. Nevertheless,

it is important to understand that those are distinct concepts. Maximization refers to the fact that individuals are simply striving for more than they already have (Seuntjens, Zeelenberg, Breugelmans, & van de Ven, 2015). Greed is a more extensive form of maximization as greedy people do not simply strive for more, but are also frustrated by not having it (Seuntjens et al., 2015). Materialism on the other hand is described as the extent to which people value worldly possession (Belk, 2014). However, dispositional greed is more than a desire for material possessions. People also experience greed for other things like power or sex (Tickle, 2004).

Greed is generally perceived as a negative concept in today's social society and most articles written about greed emphasize its negative rather than its positive connotation. For example, greed is related to impulsiveness (Seuntjens et al., 2015). Individuals are able to diminish impulsive actions if their degree of self-control exceeds their desires. But, given the fact that greed is characterized by having strong desires, it is more likely to assume that desires out bear self-control. This explains why greedy individuals are more likely to engage in money spending behavior and generally have higher purchase intentions (Seuntjens, van de Ven, Zeelenberg, & van der Schors, 2016). This leads us to the fact that greed is not merely a negative disposition. From an economist point of view, greed is perceived as a positive attitude and is associated with economic growth and development, which in turn enhances wealth, employment and well-being (Seuntjens et al., 2016). Although greed is seen as a feature with many influences on buying behavior, no research has been done on the impact of dispositional greed on product evaluation.

### *Greed and product evaluation*

Responding to the definition of attitudes, people sometimes derive their attitudes from past behavior and intentions to act (Bem, 1972). This idea is captured in the cognitive dissonance theory, a theory which states that our thoughts and feelings are likely to change towards the behavior we perform (Harmon-Jones & Harmon-Jones, 2007). According to this theory we

experience uncomfortable feelings when there is inconsistency between our attitudes and our behavior. As mentioned before, previous studies have proven that greed leads to money spending behavior and higher purchase intentions (Seuntjens et al., 2015). Thus, in order to maintain internal consistency, someone who just spent his money or had the intention to spend his money on buying a product might henceforth assume that he or she has had a positive attitude towards this product. Therefore greed is expected to increase attitudes towards the product accordingly.

A theory which is slightly different from the cognitive dissonance theory is the confirmation bias. This idea of wishful thinking states that people often seek information that confirms their actions and intentions to act, and ignore information that contradicts their actions and their intentions to act (Wason, 1960). Once people spent or had the intention to spend their money on a product, they will unconsciously embrace information, such as product quality, that justifies this behavior. As greed is associated with money spending behavior and higher purchase intentions (Seuntjens et al., 2015) it is likely to believe that greedy individuals rationalize their behavior by assigning higher quality to the concerning product.

Taken the cognitive dissonance theory and the confirmation bias into consideration, we expect dispositional greed to increase product evaluation, among which attitude towards the product and perceived quality. This leads us to the first hypothesis of the thesis:

H1: Dispositional greed positively influences product evaluation.

### **What are Scarcity appeals?**

Phrases such as “Hurry, only a few items left!” and “Already 80% out of stock!” are proved to increase consumer’s product evaluation (Mukherjee & Lee, 2016). This is what we call scarcity appeals. Scarcity appeals may indicate quantity restrictions as well as time restrictions (Mukherjee & Lee, 2016), where quantity restricted scarcity appeals emphasize limited availability of the quantity of a predefined product, and time restricted scarcity appeals indicate a

limitation on the period of time an offer is available (Aggarwal, Praveen, Jun, & Huh, 2011). The current thesis focuses on quantity restricted scarcity appeals, and therefore, we define scarcity appeals as “appeals indicating restriction on the quantity available of a product” (Mukherjee & Lee, 2016, p. 1), in which “scarcity of products arises due to high demand from other consumers or restricted supply from the firm” (Mukherjee & Yun Lee, 2016, p. 1).

Consumers have a higher willingness to buy a product as an act upon scarcity appeals (Jung & Kellaris, 2004). A motive which underlies the effect of scarcity appeals is the restriction of freedom. Consumers are about to lose freedom of choice when a product is scarce, meaning that they will soon stop having the alternative of buying the product. In an attempt to counteract this loss, consumers feel the need of purchasing the product before it gets unavailable (Cialdini & Garde, 1987). This effect can be captured in the loss aversion theory, a theory which implies that losses have a much larger psychological impact on individuals than gains of equal value (Cialdini & Garde, 1987).

### *Scarcity and product evaluation*

According to prior research, scarcity appeals in advertisement enhance product evaluation as well as purchase intentions (Brannon & Brock, 2001) (Snyder, 1992). Different motives are responsible for this relationship. People tend to use scarcity as mental shortcut, meaning that consumers make quick and often correct decisions about the quality and value of a product based on affective impressions (Griskevicius, Tybur, Delton & Robertson., 2009) without necessarily trading off attributes of a product (van Herpen, Pieters, & Zeelenberg, 2009) because people often lack the ability to engage in careful and time-consuming information processing (Langer, 1992).

To start with, the notion that scarcity appeals function as mental shortcuts can be explained by the fact that consumers have unconsciously formed a positive association between

scarcity and quality. “High-quality products are often produced in limited quantities, whereas low-quality imitations as mass-produced” (Snyder, 1992, p. 11). For instance, a dress which is handmade and limited available (haute-couture) is generally perceived of higher quality and value than a dress which is mass produced and available in megastores all over the world (primark). Moreover, there is a second dimension why scarcity appeals functions as mental shortcuts, namely that scarce products are typically popular with a large group of people since they are mostly scarce due to high demand from other consumers. Consumers favor popular products because popularity signals quality. Consumers simply infer that a product that is used by many others must be of good quality. The unconscious association between scarcity and quality on the one hand and the indication that popularity signals quality on the other hand support the expectation that scarcity appeals are likely to increase perceived quality.

Moreover, scarcity appeals may also have a positive influence on consumer attitude towards a product, keeping in mind that products which are scarce are often scarce due to high demand from other consumers. People prefer popular products not only because popularity signals quality, but also because individuals are intrinsically motivated to conform their actions to fellow consumers in order fit in with the majority. In other words, individuals in general have a strong need to belong, which is defined as “a need fulfilled only through affiliation with and acceptance from others” (Gardner, Pickett & Brewer, 2000, p. 1). In turn, owning a popular product measures up to this need to belong (Jung & Kellaris, 2004). This is in line with the theory of social proof, a heuristic cue which refers to the tendency that people are more likely to adopt the option preferred by the majority of the public (Salmon, Fennis, de Ridder, Adriaanse & de Vet, 2014). People use the actions of others as guidelines in situations when consumers are unclear about the value of a certain product. In summary, scarcity appeals increase beliefs of popularity. Both the need to belong and the theory of social proof explain that popular products are expected to increase attitude towards the product.



Given the fact that scarcity appeal functions as mental shortcut, the second hypothesis of the study is described as follows:

H2: Scarcity appeals increase product evaluation.

### **When scarcity and greed interact**

From an evolutionary point of view greed is a meaningful and productive cue in order to survive. Human beings have lived in environments where valuable resources such as water and food were scarce. Individual survival depended on dispositions like greed, as people who gained as many resources as possible (e.g. resources that protected them from starving) had a higher chance to survive (Cassill & Watkins, 2010). Therefore, the disposition of greed used to have evolutionary advantages in scarce situations. According to this evolutionary statement it is conceivable for dispositional greed and scarcity appeals to interact.

The major aim of the present study was to see whether scarcity moderates the effect of dispositional greed on product evaluation. However, it is expected that a ceiling-effect of dispositional greed creates less room for individuals who scored high on DGS to increase their greediness due to scarcity appeals than for individuals who score low on DGS, where a ceiling effect is “a term used to describe what happens when many subjects in a study have scores on a variable that are at or near the possible upper limit (“ceiling”)” (Vogt & Johnson, 2011, p. 47). Consequently, the effect of scarcity appeals on the relationship between dispositional greed and product evaluation is expected to be smaller for individuals who score higher on DGS compared to individuals who score lower on DGS. The main hypothesis tested in this thesis suggests that:

H3: Scarcity appeals moderate the positive relationship between dispositional greed and product evaluation.

### **Method**

#### *Sample*

Respondents were recruited by distributing the online questionnaire link via the social networks Facebook, LinkedIn and WhatsApp of the principal investigator (N=190; 73.7% female, 26.3% male; Mage=25.63). Three participants did not complete the questionnaire and were excluded from the analysis, which leads to a final sample size of N=187.

#### *Procedure*

Respondents were told that the purpose of the study was to gain knowledge of attitudes towards advertising. Before taking part in the study participants were obliged to read the informed consent and agree to participate in the study. Participants were informed about Digital World, an online store in Japan that specializes in consumer electronics such as TVs, DVD players, camcorders and videogames. Digital World was planning to open an online store in North-America. In the experiment, participants were told they saw their website featuring an advertisement for a new video game system (appendix 1). Participants were randomly assigned to either the control condition or the experimental condition, in which the experimental condition manipulated the independent variable by adding a quantity restricted scarcity appeal in the advertisement. The current procedure including the Digital World case, the questionnaire regarding product evaluation and the fictional advertisement followed the procedure of Mukherjee & Yun Lee (2016), who investigated the moderating role of expectation of scarcity on product evaluation.

#### *Independent Variable*

Scarcity appeals were displayed in the experimental condition by adding both the phrases “Hurry, Limited Quantities!” and “Only 20 Units in Stock!” into the advertisement in order to indicate quantity restrictions. These phrases were the only aspect in which the advertisement in

the experimental condition differed from the advertisement in the control condition. The success of the manipulation was checked by two questions regarding the perceived scarcity after the displaying the advertisement, namely “The advertisement stated that there were limited quantities of the Nintendo Wii available” and “The advertisement stated that there were only 20 items on the Nintendo Wii available for purchase” which could be answered with either agree or disagree. The manipulation check was tested using an independent sample t-test. Results showed a significant difference for the manipulation check items between the scarcity and no scarcity condition ( $M = 2.1$  vs.  $5.6$ ,  $t(181,226) = -16,772$ ,  $p < 0,001$ ).

In this thesis dispositional greed was determined based on Dispositional Greed Scale (DSG) score. DGS is a valid 7 item greed scale to measure scores of dispositional greed developed by Seuntjens et al. (2014) (Table 1) in which responses were measured by a 7-point Likert-scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* ( $M=2.96$ ,  $SD=1.02$ ). Cronbach’s alpha ( $\alpha$ ) was measured to verify reliability of the DGS (Cronbach’s  $\alpha = 0,791$ ).

**Table 1. Dispositional Greed Scale items, Means, Standard Deviations and Cronbach’s alpha of the Dispositional Greed Scale**

Items	Condition		
	No Scarcity N = 85	Scarcity N = 100	Total N = 185
1. I always want more.	3.14	3.54	3.35
2. Actually, I’m kind of greedy.	2.81	3.06	2.94
3. One can never have too much money.	3.45	3.80	3.64
4. As soon as I have acquired something, I start to think about the next thing I want.	3.27	3.32	3.30
5. It doesn’t matter how much I have, I’m never completely satisfied.	2.49	2.53	2.51
6. My life motto is “more is better”.	2.03	2.36	2.21
7. I can’t imagine having too many things.	2.65	2.87	2.77
Mean	2.83	3.06	2.96
Standard Deviance	0.90	1.11	1.02
<b>Cronbach’s <math>\alpha</math></b>	<b>0,791</b>		

*Note.* Participants are asked to indicate the extent to which they agreed that these items were descriptive of themselves. Responses were measured on 7-item Likert-scale ranging from 1=*strongly disagree* to 7 = *strongly agree*

### *Dependent Variable*

As mentioned before, product evaluation was measured in two ways, namely: perceived product quality and attitude towards the product. Participants received five 7-points Likert-scale questions about the attractiveness, quality and reliability of the Nintendo Wii, in which scores on attractiveness and value indicate attitude towards the product, whereas scores on quality and reliability indicate perceived quality of the product: “The Nintendo Wii is undesirable/desirable, unattractive/attractive, not valuable/valuable” and “Compared to the other videogames on the market, the advertised Nintendo Wi is likely to have lower/higher reliability, lower/higher quality” (Mukherjee & Lee, 2016).

Questions regarding product evaluation and the DGS were exposed to the respondents in randomized order.

## **Results**

A hierarchical multiple linear regression analysis was conducted to analyse results of the questionnaire. To test hypotheses one and two the first equation was set up, with the dummy-coded scarcity (0 = no scarcity, 1 = scarcity) and DGS as independent variable, product evaluation as outcome, and with no interaction term taken into account:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 D$$

Where Y = dependent variable (attitude towards the product, perceived quality, product evaluation overall);  $X_1$  = DGS; D = scarcity (0 = no scarcity, 1 = scarcity)

The first hypothesis states that individuals who scored higher on DGS are expected to score higher on product evaluation compared to individuals who scored lower on DGS. Results showed no significant relationship between DGS score and perceived quality ( $\beta = 0,046$ ,  $p =$

0,553), attitude towards the product ( $\beta = 0,117$ ,  $p = 0,111$ ) or product evaluation overall ( $\beta = 0,096$ ,  $p = 0,194$ ), which means no support for hypothesis one was found.

The second hypothesis states that scarcity appeals are expected to be positively related to product evaluation. However, results showed no significant relationship between the dummy variable scarcity and perceived quality ( $\beta = -0,075$ ,  $p = 0,307$ ), attitude towards the product ( $\beta = 0,036$ ,  $p = 0,491$ ) or product evaluation overall ( $\beta = -0,014$ ,  $p = 0,854$ ). Therefore, hypothesis two was not confirmed.

The third hypothesis predicted that scarcity appeals moderate the effect of dispositional greed on product evaluation. Therefore, a possible interaction effect between scarcity and dispositional greed was included in the second regression equation. An interaction term was created between those two (dummy-coded scarcity x DGS).

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 D + \beta_3 X_1 D$$

Where Y = dependent variable (attitude towards the product, perceived quality, product evaluation overall);  $X_1$  = DGS; D = Scarcity (0 = no scarcity, 1 = scarcity);  $X_1 D$  = interaction effect between DGS and scarcity appeals.

A non-significant interaction effect revealed that scarcity appeals do not moderate the effect of dispositional greed on attitude towards the product ( $B = 0,183$ ,  $p = 0,261$ ), perceived quality ( $B = 0,232$ ,  $p = 0,215$ ) and product evaluation ( $B = 0,203$ ,  $p = 0,194$ ).

## Discussion

The main aim of the study was to test whether the effect of dispositional greed on product evaluation was moderated by scarcity appeals. Contrary to the main hypotheses, results showed

that scarcity appeals do not moderate the effect of dispositional greed on product evaluation overall, and attitude towards the product and perceived quality specifically. The current thesis does not indicate a positive relationship between dispositional greed and product evaluation (hypothesis 1), neither does it show a relationship between scarcity and product evaluation (hypothesis 2). These conclusions are conflicting with previous literature. Several possible explanations for these conclusions will be discussed.

### *Attitude strength*

As mentioned before, past research on dispositional greed showed that greed is associated with money spending behavior and higher purchase intentions (Seuntjens et al., 2015). As discussed, previously performed behavior plays an important role in attitude formation, hence the current thesis expected dispositional greed to positively influence consumer's attitudes towards the product in accordance with the cognitive dissonance theory. Furthermore, dispositional greed was expected to increase perceived quality of the product as a result of the confirmation bias. Both the cognitive dissonance theory and the confirmation bias are rules of thumb to simplify decision making, which capture the fact that people are likely to derive their attitudes and perceptions from their actions or intentions to act. However, results of the thesis did not meet this expectations.

Bem (1972) indicated that people only derive their attitude from past behavior when internal cues were weak, ambiguous or uninterpretable. It is highly possible that participants have already formed strong attitudes towards the Nintendo Wii prior to participating. When people form attitudes but have little information about what these attitudes might be, they tend to assume that their attitudes are consistent with their previous actions or intentions to act. Nevertheless, when people already do have strong attitudes towards a product, they simply have no valid reasons to use past behavior as a way to form new attitudes. Consumers who held strong attitudes toward a product are less likely to make use of simple rules of decision making such as

the cognitive dissonance theory and the confirmation bias (Chaiken & Baldwin, 1981). If this is the case, people who score higher on dispositional greed compared to people who score lower on dispositional greed are indeed more likely to engage in money spending behavior and have higher purchase intentions, however, these actions do not result in a change of product evaluation in the current thesis due to formerly shaped attitudes towards the Nintendo Wii.

### *Cognitive Load*

Consumers often lack the ability to engage in careful and time-consuming information processing (Langer, 1992). This happens when consumers are under high cognitive load. Cognitive load has been defined as the degree to which resources required for mental processing are constrained (Paas, Tuovinen, Tabbers, & Van Gerven, 2010). Increasing cognitive load hinders individuals to effortful process information about a certain product (e.g. quality of persuasive arguments) and sets them in a state where they rely their decisions on intuition (Deck & Jahedi, 2015). Therefore, consumers are more susceptible to apply simple decision making rules (mental shortcuts) and others ways to effortlessly come to a decision when cognitive load is high. Cognitive load in everyday public settings is usually high (e.g. imagining a school canteen; an area with many distractions and choices; people are exposed to multiple offers). Contrarily, cognitive load is relatively low as participants of the current thesis are completing the questionnaire (e.g. less distractions and choices; participants need to consider only one advertisement).

The absence or shortage of cognitive load in the current thesis might form another explanation why greed did not have the expected effect on product evaluation (including both attitude towards the product as well as perceived quality) due to a decrease in impulsive behavior. Impulsiveness is said to play an important role in the relationship between greed and money spending behavior or purchase intentions (Seuntjens et al., 2015). Impulsiveness is described as a construct that involves a tendency to act on a whim, displaying behavior

characterized by little or no forethought, reflection or consideration of the consequence (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). In light of the fact that cognitive load restrict individuals from effortful reasoning, it is likely to believe that high cognitive load encounters impulsive behavior. Meanwhile, low cognitive load might be likely to diminish impulsive behavior since consumers are given the opportunity to consider on decisions and its consequences. As cognitive load in the present thesis is very likely to be low, participants do not establish product evaluation of the Nintendo Wii in response to impulsive actions, instead they are given the ability to reflect on their reasoning system.

The concept of cognitive load may also underlie the absence of the relationship between scarcity and overall product evaluation , since cognitive load is found to manipulate consumer's persuasion knowledge (Mukherjee & Lee, 2016). Persuasion knowledge is defined as "individual's knowledge about persuasion agents' motives and influence techniques" (Campbell & Kirmani, 2000) and influences how people will respond to persuasion targets. When consumers have high persuasion knowledge, it means they might get more suspicious about marketers' actions which in turn diminished the effects of scarcity appeals on product evaluation (Mukherjee & Lee, 2016). People's ability to recall persuasion knowledge increases considerably when people are under low or no cognitive load. Again, cognitive load in the current thesis is low which increases the likelihood that participants might question the verity of the presented scarcity appeals. As a result; they do not believe that the Nintendo Wii in the advertisement is actual running out of stock. The application of scarcity appeals then no longer acts as a valuable persuasive message (McQuarrie, Edward & Phillips, 2005).

### *Expectation*

A final clarification for the unsuspected results in this thesis concerns expectation and applies to both attitude towards the product as well as perceived quality. Scarcity appeals seem to be more effective when consumers have high compared to low expectations of scarcity, in



which high expectations refer to situations such as shopping seasons in November and December, or “early stages of the life cycle when the product has just been launched in the market.” (Mukherjee & Lee, 2016, p.4) Contrarily low expectations refer to situations such as regular shopping seasons or “during later stages of the product life cycle when the product is no longer new to the market.” (Mukherjee & Lee, 2016, p.4). The independent variable of scarcity appeal was manipulated in the advertisement for the Nintendo Wii videogame which is originally released in 2012, accordingly the product is no longer new on the market and diminishing in popularity. Because of this, participants might have low expectations of scarcity due to demand and therefore, here again, they might question the verity of the scarcity appeals in the advertisement presented. Participants simply do not believe that the Nintendo Wii is indeed scarce.

### *Limitations and Future research*

The current thesis reports some important limitations that readers should be aware of. Firstly, to validly examine the effects of dispositional greed it is important to regard previously formed attitudes towards the product used in the manipulation. Like mentioned above, people derive their attitudes (e.g. product evaluation) from their behavior (e.g. purchase intentions as a result of greed or scarcity) only when formerly shaped attitudes towards to product are weak, ambiguous or uninterpretable (Bem, 1972). In this thesis the Nintendo Wii is used to manipulate scarcity. It is greatly possible that participants have formed an attitude towards the Nintendo Wii prior to the thesis, since this product is taste-bound and has been on the market for a multiple years now. Thus, when an individual has formed an attitude towards a product prior to the study, this could greatly affect results of the study. Future research could further examine the effects of attitudes on product evaluation.

Second, according to the study of Mukherjee & Lee (2016) scarcity appeals affect product evaluation when expectation is high, and not when expectation is low. Expectation in the

current thesis is low since participants have no reason to believe why the Nintendo Wii will soon be out of stock due to high demand from other consumers. In order to find valid results on the effects of scarcity appeals it is important to apply the manipulation of scarcity appeal in a manner so that individuals expect scarcity to occur. Also, the validity of the manipulation should be checked. To make sure this proposition is true, future research on expectation is necessary.

A significant clarification for the findings in this study is the absence or shortage of cognitive load. However, it is beyond the scope of this study to examine the moderating effect of cognitive load on the relationship between dispositional greed and product evaluation, and on the relationship between scarcity appeals and product evaluation. The effect of dispositional greed on product evaluation, the effect of scarcity appeals on product evaluation and the interaction effect between dispositional greed and scarcity appeals may depend on consumer's cognitive load. Therefore, this forms an important lead for future research.

### *Practical implications*

Most individuals consider themselves as rational decision makers and believe they make their decisions based on the assumption that they are able and willing to engage in careful and time consuming information processing (Langer, 1992). This is not true. For example, in spite of the fact that people who suffer obesity are trying to engage in weight reduction behavior, they might not rarely chose to buy a high sugar snack instead of an apple. People often don't have either the motivation or the ability to accurately analyse all the information that is available and make responsible choices. As a result, humans tend to make decisions based on their instinct, dispositions, rules of thumbs (e.g. mental shortcuts) and social influences. When policymakers know how people respond to these kind of unconscious influences, they are able to help individuals in making better decisions (e.g. cheaper, healthier) by altering these influences. Scarcity appeals are an example of those rules of thumbs and policymakers do not rarely make use of them. However, it is important for them to realize that scarcity appeals are not appropriate

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for every situation. Furthermore, greed is one of many dispositions on which people are likely to base their decisions. Provided that policymakers want to apply techniques as efficiently as possible, they must take into account that people with certain dispositions, such as greed, may respond differently on certain persuasion techniques. Here again, it is necessary to further investigate the effects of scarcity appeals and dispositional greed on product evaluation, and the moderating effect of scarcity appeals of dispositional greed.

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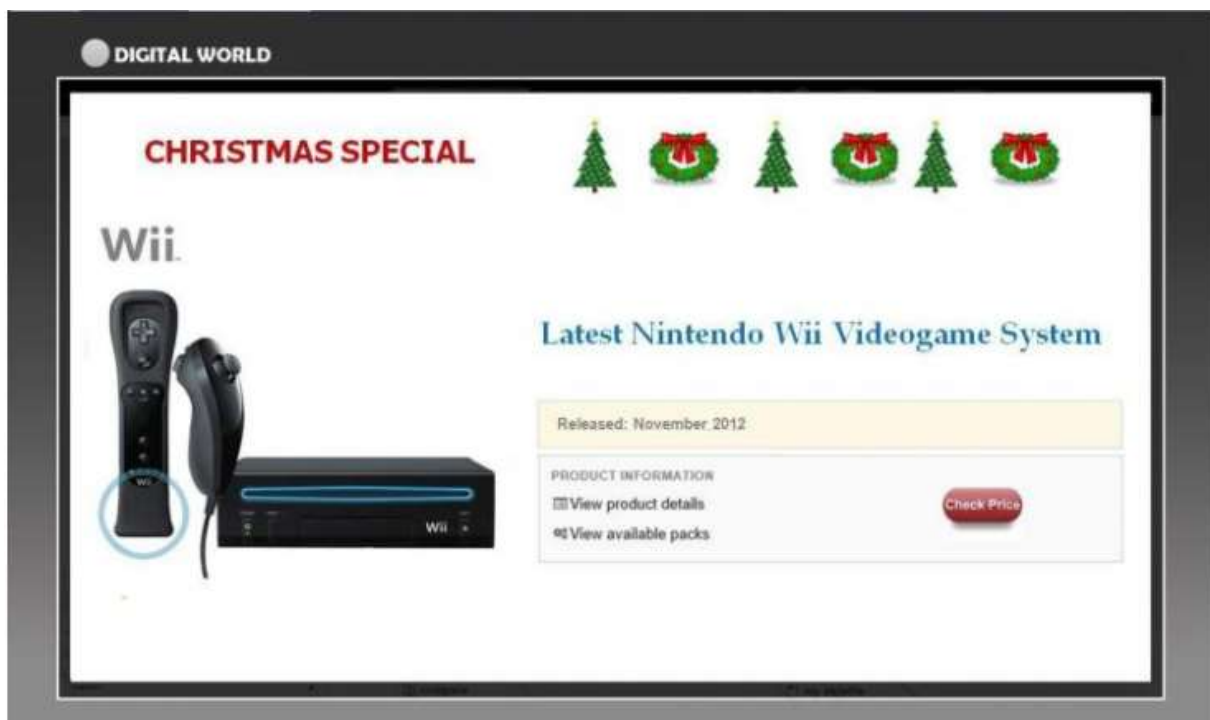
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Nintendo Wii advertisements:



*Figure 1:* The advertisement regarding the Ninentendo Wii as presented in the experimental condition (with “Hurry, Limited Quantities!” and “Only 20 units in stock!” indicating scarcity).



*Figure 2:* The advertisement regarding the Nintendo Wii as presented in the control condition.