Do followers think fast? Studying the relationship between the bandwagon effect and cognitive reflection

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Abstract

In consumer science, the bandwagon effect can be defined as a social bias in which people buy certain products to follow others. Although scientists have found that biases can be related to the cognitive style of individuals, it has not yet been clarified if cognitive reflection can also predict the bandwagon effect. In addition, previous literature has shown that the need for affiliation could explain the bandwagon effect. Moreover, some studies have demonstrated that prosocial individuals have an intuitive cognitive style and an affiliative pattern of relating to others. Therefore, the goal of this study is to give a preliminary understanding of the relation between cognitive reflection and the bandwagon effect mediated by the need for affiliation. Three hundred fifty-four participants filled an online survey with the 7-item Cognitive Reflection Test, a product choice instrument and an affiliation scale. The results suggest no direct or indirect effect between cognitive reflection and bandwagon effect, when the need for affiliation was a mediator. In other words, people follow others regardless of their cognitive style. Nonetheless, this study found that reflective individuals had less need for affiliation, and intuitive individuals had more need for affiliation. Therefore, it is recommended that future research should use a more reliable instrument to measure the bandwagon effect to replicate these findings.

Keywords: Bandwagon effect, cognitive reflection, need for affiliation, social bias, automaticity, consumption trends.

Introduction

Have you ever gone to a new city and looked for a restaurant to have lunch? The decision you will make, will probably be based on the available information (e.g. the number of people eating in the place). If a restaurant is crowded, there must be something good about it, right? When other consumers purchase a product, the preference for this good increases, this phenomenon is referred to as the bandwagon effect. However, not all individuals in the example of the restaurant are affected by this information in order to make their decision. Some people are more or less susceptible to incur in the bandwagon effect depending on their personality traits (Kastanakis, 2010; Van Schalkwyk, 2014).

Borghans, Duckworth, Heckman and Ter Weel (2008) showed that cognitive traits can affect our economic decisions. For instance, cognitive reflection can be considered as a cognitive trait (Frederick, 2005) and has been studied with regard to heuristics and biases (Kahneman, & Frederick, 2002; Toplak, West, & Stanovich, 2011). Although a high spectrum of heuristics and biases have been correlated with the cognitive reflection, there is no evidence of studying the relationship between the bandwagon bias and the cognitive reflection. For this reason, this study explores the relationship between the bandwagon effect and the cognitive reflection and gives an emerging approach to the topic to contribute to the understanding of economic decision-making.

There is evidence of how people purchase mainstream products, instead of choosing unique products, in order to belong to a certain group of people as a way of approval from others (Kastanakis & Balabanis, 2012; Shaikh, Malik, Akram & Chakrabarti, 2017). In fact, some people choose to be ‘average’ to avoid costs in time, energy and social risk (e.g. ostracism, rejection, criticized, etc.) (Wan, Xu & Ding, 2013). Moreover, the cognitive style of an

individual can predict their social motivations (Rand, Greene, & Nowak, 2012). Therefore, incurring in the bandwagon effect can be related to a high need for affiliation and to the cognitive style. For this reason, this dissertation also has an attempt to explore the role of the need for affiliation in the relationship between cognitive reflection and the bandwagon effect.

However, as mentioned before, the relation between the main variables of this study have not been studied directly, so there is still an unresolved question. Therefore, comprehending that some people can easily be affected by a particular kind of information contributes to social psychology, in the way that behavior of masses affects individual decision making. Moreover, this study contributes to the comprehension of how consumption takes place based on social relationships and implicit social norms. In this way, the results could provide one of the reasons why people follow trends, and who are more disposed to follow them.

Bandwagon effect

Are purchasing decisions solely based on what the consumer thinks about the product or can they be based on what other consumers think about the product? Leibenstein (1950) found two types of demand: functional and non-functional. Functional demand refers to the attributes of the product such as quality, durability, size, etc. Non- functional demands are related to irrational buying, speculative demands and status concerns, which can be considered external motivators. Non-functional demands underlie the bandwagon effect, the snob effect and the Veblen effect. These effects influence the purchasing behavior of one consumer due to the behavior of other consumers. For instance, in the bandwagon effect, individuals will acquire a product to a larger extent when others buy the product. Reversely, the snob effect is explained as a diminish in a good's demand when others buy this product. Similarly, the demand for a product increases

when the price of it rises in the Veblen effect (Corneo, & Jeanne, 1997; Kastanakis, 2010; Leibenstein, 1950; Page, 1992;).

The name bandwagon came from the idea that people 'get up' in the wagon due to its popularity, which in turn describes the social motives that trigger the effect. Kastanakis and Balabanis (2012) explained the social origins and social valence of the bandwagon effect for the consumption behavior. The social origins refer to the creation of the effect, which is initiated by mimicking others' purchase because of conformity or to obtain information of the product's value in contexts where they are unsure about it (Herphen, 2005). Likewise, following others means that knowledge or information about other consumers' decision, is available, accessible and from a good quality source (Kastanakis & Balabanis, 2012). On the other hand, social valence denotes the relevance of motivations as reinforcers of the consumption of certain products in a specific group of people. For example, group affiliation or self- concept strength can be a reason to become a bandwagoner (Vigneron & Johnson, 1999).

Therefore, it is crucial to examine the social origins of the bandwagon effect in order to recognize which circumstances it raises. For instance, obtaining incomplete information when choosing a product leads to social effects, spearheaded by an actor (e.g. influencer, movie actor, model, singer) or group of actors that validates the information (Baldi, Iannello, Riva & Antonietti, 2013; Rosenkopf & Abrahamson, 1999). A study demonstrated that the bandwagon effect was stronger when the uncertainty about the quality of the movies increased (Xu & Fu, 2014). In other words, when people are not sure how good or bad a movie is, they rely on public opinion to make their film choice. Other examples of the bandwagon effect when there is no certainty about the content or quality are the ranking of sold products in Amazon, the most

watched videos on YouTube, the best sellers list for books and the popular songs on iTunes (Sundar, 2008). Speculative activity explaining the bubble market is also a great example of taking decisions according to the bandwagon effect (Kaizoji, 2000).

Studies on social influence have also observed the effect of others when acquiring a product. Huh, Vosgerau and Morewedge (2014) studied the impact of observed choices when buying an unknown product. The results suggest that people imitated the confederate's choice more likely in a private situation (vs. a public situation) as an automatic response. Additionally, social default or imitation choice occurred more in the presence of unknown products rather than well-known products. These results are oriented to the idea that in uncertain environments people lack cognitive effort to deliberate and prefer to imitate others.

Nevertheless, it is important to differentiate the bandwagon effect from the social default bias in two important aspects: origin and effect in the absence/presence of the brand. The first dissimilarity between the two concepts is the way they are caused; for the social default, it is necessary that someone that buys the product in a visible context and thereafter people will imitate him or her (Huh, Vosgerau & Morewedge, 2014). Whereas, in the bandwagon effect the more people buy the product, the stronger the effect. The idea that underlies the bandwagon effect is 'following the masses', which is how trends bottom-up (Bourgeon-Renault, 2000), therewith comes the second difference related to the brand. The social default effect happens only in the absence of the brand, while the bandwagon effect can happen either in the presence or absence of brand (Miller, Mills & 2012).

But are all individuals equally affected by the bandwagon effect in the same way? Kong-Hee (2012) argued that people with a shortage of cognitive complexity are expected to be more

sensible to heuristics and emotional cues. Behaviors affected by collectivism -like the bandwagon effect- usually appear from conformity effect and emotion contagion (Chao & Li, 2010). Kringelbach (2004) explained that social decision making relies more on emotional rather than rational evidence. In other words, making a purchasing decision based on others' behavior is irrational. Back to the example of the restaurant, a person following rational behavior would have looked at every single restaurant and analyzed the attributes until choosing the place with the best attributes. But this process takes time and energy that our brain wants to keep for more important decisions. So, the lack of knowledge leads to decision making based on social heuristics and emotional cues, even more, when people rely on emotions.

To understand if all individuals are susceptible to following others when purchasing goods, Kastanaki and Balabanis (2012) studied personality traits in relation to this effect. The experiment showed that interdependency correlated positively with the bandwagon effect, mediated by three variables: status-seeking predispositions, susceptibility to normative influence and need for uniqueness. Shaikh, Malik, Akram and Chakrabarti (2017) replicated the previous study and obtained the same results: collectivistic or interdependent cultures are more susceptible to follow the bandwagon effect when purchasing a product. In conclusion, others' opinions are crucial in the process of buying a product, especially when people care about forming relationships. Furthermore, some studies found that interdependency is associated with the bandwagon effect, and at the same time, they found women were more interdependent than men (Kastanakis & Balabanis, 2012; Shaikh, Malik, Akram, & Chakrabarti, 2017).

Kastanakis and Balabanis (2012) suggested that further research must be done to explain the personality traits or characteristics that origin the effect. For this reason, we will add to the

literature by looking at how the cognitive style, need for affiliation and gender influences the bandwagon effect.

Cognitive reflection

The Dual-process or dual-system theories explain the two cognitive systems (system1 and system 2) in which information is processed by individuals (Evans & Stanovich, 2013; Stanovich & West, 2000; Kahneman, & Frederick, 2002). This theory inspired Frederick (2005) to introduce the concept of cognitive reflection and subsequently the Cognitive Reflection Test (CRT) as an instrument to measure the cognitive styles. Low scores in the CRT suggest an intuitive cognitive style which can be described as fast, automatic, associative, biased, effortless and unconscious; while high scores on the CRT indicate a reflective style defined as logic, controlled, slow, conscious, effortful and based on normative.

One of the features of the intuitive style is the biasing nature, which can lead the individuals to access information by using heuristics. Among all the biases, cognitive biases have been associated with cognitive reflection. For instance, intuition is correlated with higher incidences of the Causal Base Rate (Hoppe & Kusterer, 2011). Individuals with high scores on the CRT were less prone to commit conjunction fallacy (Oechsslera, Roidera & Schmitzb, 2009) and less susceptible to sampling bias (Toplak, West & Stanovich, 2011). Therefore, these biases affect the judgments because individuals make decisions based on their inner beliefs or preferences instead of basing their choice on systematic information.

Moreover, cognitive reflection has also been related to social biases, which are distinguished by shaping judgment due to a social environment. In other words, the presence of other

individuals affects decision making, where individuals with low cognitive reflection are more influenced than individuals with high cognitive reflection (Belloc, Bilancini, Boncinelli & D'Alessandro, 2018). In addition, some studies have found that intuitive individuals are more motivated to cooperate with others than reflective individuals, even when it is not beneficial or profitable for themselves (Rand, Greene, & Nowak, 2012; Rand, et al., 2014). This implies that cognitive style can predict the behavior towards other individuals.

Attribution bias is a social bias that can also change the perception we give to a certain object or event based on people's opinion. For example, a study showed how easy is to persuade individuals in order to assign explanations of an event based on an argument given by a persuader (Cialdini, Braver & Lewis, 1974). Regarding cognitive reflection, researchers asked university students if they would accept a proposal to travel on a boat with a famous person as a host rather than an anonymous. The results showed that participants with low reflection were five times more influenced by social bias (status bias), which means they preferred the trip with the famous person (Baldi, Iannello, Riva & Antonietti, 2013). In this case, participants attributed more positive advantages to spend time with a famous person rather than with a normal citizen.

Some individuals can attribute characteristics to objects based on the opinion of other individuals. As for this, people will prefer certain products because they are linked to a social group. This leads to classification, stereotyping and identification which in the end shapes social behavior (Ashforth & Mael, 1989). Other individuals will find cues in products in order to make attributions related to the status (Nelissen & Meijers, 2011). However, the relationship between cognitive reflection and the attribution heuristics in consumption has narrowly been studied.

Cognitive reflection has also found to be related to gender because some studies found that men punctuated higher than women, which means that men are driven by reflection to a greater extent than women (Frederick, 2005; Hoppe, & Kusterer, 2011). Although there is no evidence to explain this difference, some theories suggest that education, motivation towards the test or even cognitive skills could be the reason for men to score higher than women in the CRT (Cueva, et al, 2016). Other studies have found that testosterone can also have effects on cognitive reflection (Bosch-Domènech, Brañas-Garza, & Espín, 2014).

Finally, intuitive cognitive style is responsive to environmental experiences, while the reflective system is based on individual differences due to computational capability (Kokis et al., 2002). However, this study aims to understand if the cognitive style of an individual also predicts bandwagon bias. In this way, we propose that individuals pulled by intuition would make their decision of purchasing a product depending on the environment, which in this case is the number of people buying the products. On the other hand, reflective individuals evaluate information by sections, so they would calculate the outcomes of the decision based on the computation of each of the attributes available (quality, size, price, etc.). For this reason, the present research proposes that intuitive cognitive style will be more susceptible to the bandwagon effect than an individual with a reflective style, as states the first hypothesis.

H1: Cognitive reflection and the bandwagon effect are negatively correlated, which means that the higher/lower an individual score in the CRT the less/more prone is to incur in the bandwagon effect.

One reason why people use mental short-cuts is to avoid cost (time, money, social cost, energy, etc.) (Gavious & Mizrah, 2001). Similarly, to the other heuristics and biases, the

bandwagon effect could also be explained by automaticity, mimicry, and conformity (Kastanakis, 2010). In fact, there are studies that showed that societies where conformity is more recurrent, the people are more influenced by the bandwagon effect in their purchase (Shaikh, Malik, Akram & Chakrabarti, 2017). In this sense, if intuitive individuals are more socially motivated and bandwagon effect is a result of a social process, then the need for affiliation plays a role in this relationship.

Need for affiliation

Affiliation is the desire to form relationships with other individuals and be part of a group (Murray, 1938). Evolutionary psychology shows that humans have survived due to the formation of alliances (Hill, & Hurtado, 1996). The difference between belongingness and affiliation is that the first is related to maintaining long lasting relations while the second is the motivation to form new contacts and conveys no indication of quality or length of the social encounter (Leary, 2010). Thus, an individual will conduct certain behaviors in order to satisfy or accomplish the need for affiliation.

For example, people with a high need for affiliation are seeking social acceptance, and their decisions are oriented towards a group. As shown by McGhee and Teevan (1967) in a study that reveals a positive correlation between affiliation and conformity. In terms of consumption, Griskevicius and Kenrick (2013) also showed that people prefer to buy certain brands to fit in a social group because they are preoccupied about their peers' opinion. Other studies showed that people would buy the same product that the reference's group buys just to avoid rejection (Wan, Xu, & Ding, 2013). This is what bandwagoners do, they follow trends to fit in a particular group. Even though the bandwagon effect has not been studied with affiliation, Kastanakis (2010)

explains that the individuals that incur in the bandwagon effect, the snob effect and the Veblen effect are seeking for affiliation, in different ways.

In this sense, people are willing to spend more money and ignore the technical features of an object because their purchase is based on social behavior. However, the cognitive style of an individual can affect social preferences. As an illustration, the research found that reflective people were less socially motivated than intuitive people (Corgnet, Espín & Hernán-González, 2015). This means that reflective thinkers decide towards individual payoffs and not towards group interests. Additionally, Strack and Deutsch (2004) explained that reflective decision making is based on facts and values while intuitive decision making is affected by a social motivation to a greater extent. Thus, we propose that the need for affiliation (considered as a social motive) can be pursued by intuitive individuals and be ignored by reflective individuals in decision making.

All in all, cognitive reflection predicts the social motives of an individual, that in this case is the need for affiliation, which in turn predicts how prone a person is to incur the bandwagon effect. For this reason, it is suggested that the need for affiliation could explain why the relationship between cognitive reflection and the bandwagon effect occurs.

H2: Affiliation mediates the effect of cognitive reflection on the bandwagon effect.

Additionally, there is evidence in the literature that both cognitive reflection and need for affiliation are related to gender. In this sense, if gender is correlated with cognitive reflection and it turns out that cognitive reflection is correlated to the bandwagon effect, then gender could also predict the bandwagon effect. Therefore, if men score higher on the CRT than women and CRT

results have a negative correlation with the bandwagon effect, then men would have a lower score in the bandwagon effect than women.

H3a: Cognitive reflection mediates the relationship between gender and bandwagon effect.

Likewise, Shira and Gardner (1999) found that women are more interdependent regarding relations with others, whilst men are more independent when it comes to relationships. Hence, Ackerman and Chung (2017) studied how the relationship with others explained the product attitude in gender. The study showed that women had a more positive attitude towards "we products" (group-use products) than men. The theoretical basis that supported their finding was the "need of togetherness", which lead to decision-making oriented toward a group. In line with these findings, studies provide evidence that gender is associated with affiliation and women are more affiliative than men (Wong & Csikszentmihalyi, 1991).

All in all, if gender predicts the level of affiliation of an individual and there are studies that support an indirect association between need for affiliation and the bandwagon effect, then gender can be a predictor of the bandwagon effect. On this behalf, women who have a high need for affiliation will be more prone to the bandwagon effect; therefore, women will be more susceptible to the bandwagon effect than men.

H3b: Need for affiliation mediates the relationship between gender and bandwagon effect.

Method

Participants and design

Three hundred fifty-two people filled the survey online (60% in English, 32% in Dutch 8% in Spanish) through opportunity sampling. Subjects on the street were asked to complete the survey by using an iPad or to fill it by clicking on the link posted through social media, but they were no paid for their time. Ninety-five participants were excluded from the analysis: 65 had missing data on the dependent measures and 6 had missing data on gender. Respondents were not excluded for filling incompletely the CRT questionnaire, but at least one answer was needed to avoid exclusion. This left a sample of 281 participants from which the analysis not related to gender were developed, after including the gender as a variable we excluded people that did not fill this answer remaining 257 participants (70% female $M = 25.76$, $SD = 9.18$ and 30% male $M = 29.99$, $SD = 12.01$). In these studies, a priori power analysis was not conducted, but the sample size was calculated based on previous studies that tested the correlation between Bandwagon effect and personal traits (Wanhsiu Sunny, Qinghua & Yu, 2013) or cognitive reflection and decision making (Evans, Dillon & Rand, 2015).

Measures, materials and procedure

The predictor variable was the cognitive reflection style (continuous variable), and the outcome variable was the level of the bandwagon Effect (continuous variable). We conducted a Web-based survey uploaded in Qualtrics that was developed first in English and then translated into Dutch and Spanish. Bilingual students conducted the translation to improve accuracy and meaning equivalency of the survey.

Cognitive reflection. To measure the cognitive style, the participants filled the 3-items developed by Frederick (2005) and 4-items developed by Toplak, West and Stanovich (2014) (See Appendix A). The correct answers were coded as 1 and the incorrect or empty answers were coded as 0. The scores were added and as a result the maximum score was 7 and the minimum was 0, the negative scores were left as 0. However, the participants were asked if they knew the questions from this section. In this case, the number of questions known by the participants was subtracted from the score, but negative answers were coded as zero.

Bandwagon effect. For measuring the bandwagon effect an adaptation of the instrument developed by Huh, Vosgerau and Morewedge (2014) was applied to understand the product choice. The idea was that the products were not popular among the participants and there was no precise knowledge of it. People had to choose the likelihood to buy one of the products throughout a scale, and they could even say they have a preference for neither option. The products in the test were an elliptical machine, binoculars, a pillow, a spa, and Chinese tea (See Appendix B). The bandwagon effect inventory was found to be medium reliable (5 items; α = .45). Each pair of options the products included one attribute such as price, size or quality and indicates the “best seller”, which means is the product that people buy the most. The score was set in the following way: “I don’t care” = 0, maximum bandwagoner answer = 5 and maximum no bandwagoner answer = -5 after that the average of answer gave the final score.

Figure 1. A sample of the bandwagon test. On the left, there is an option with better quality and on the left, the option has less quality, but more people buy the product.

Need for affiliation. To measure the affiliation's need, this study used the tool developed by Hill (1987). Due to the length of the questionnaire, the items with highest Cronbach's alpha were chosen, so the final scale consisted of 12 items (α = .58) (See Appendix C). The score for each of the items was: strongly disagree = 1, moderate disagree = 2, neither disagree nor agree = 0, moderate agree = 4 and strongly agree = 5. After that, the scores were added, and the maximum score was 60 and the minimum 0.

Results

Confirmatory analyses

This study analyzed the relation between cognitive reflection and the bandwagon Effect. The average of the cognitive reflection was 3.03 (*SD* = 2.19) and the distribution of the scores is showed in figure 2. The score that people obtained the most was 0 and the least obtained was 7.

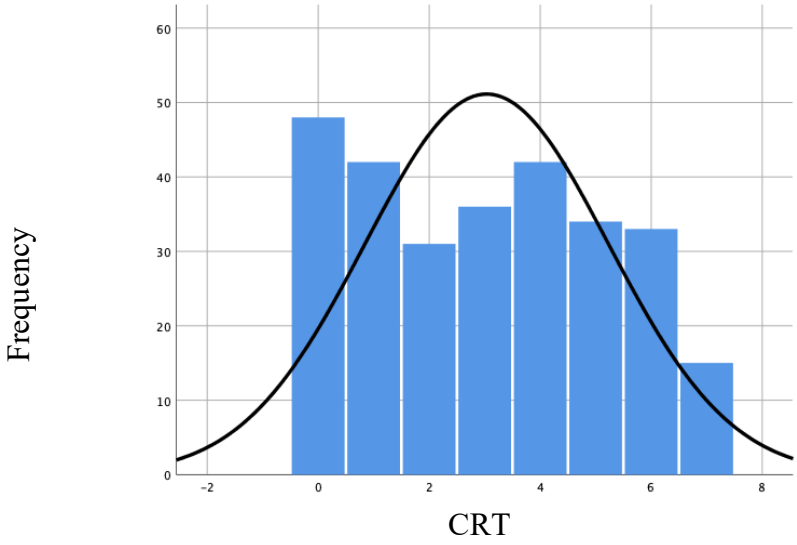

Figure 2. Frequency histogram of cognitive reflection score (*M*=3.04, *SD*=2.19, *n*=281).

Normally the CRT was tested with a 3-item test, but this study used the 7-item test developed by Toplak, West and Stanovich (2014). For this reason, we wanted to compare our results to the mentioned research. Cognitive reflection score for the sample of 281 students was statistically different from the compared value of 1.47 ($M = 3.04$, $SD = 2.19$, $n = 281$, 99%, $t(280) = 11.97$, $p < .001$, $d = -0.79$). According to Cohen's (1988) this effect size is considered to be a large effect ($d = -.79$). Results showed that people in this study had a higher mean of cognitive reflection (Table 1).

Table 1

Descriptive Statistics for CRT of the present study compared to Toplak, West & Stanovich (2014).

Outcome	M	SD	N
CRT from the present study	3.04	2.19	281
CRT from Toplak, West & Stanovich (2014)	1.47	1.71	160

For the bandwagon Effect the average was -1.38 (*SD* = 1.52). A single sample t-test was conducted to determine if there was a preference for the bandwagon product in this study. Participants showed a preference for the 'non bandwagon' choice, $t(280) = -15.15$, $p = 0.001$, when compared to the value 0 which referred to the "I don't care" option like shows figure 3. This finding demonstrated that people focused more on the other attribute such as quality, price, size and guarantee instead of choosing the best sold product.

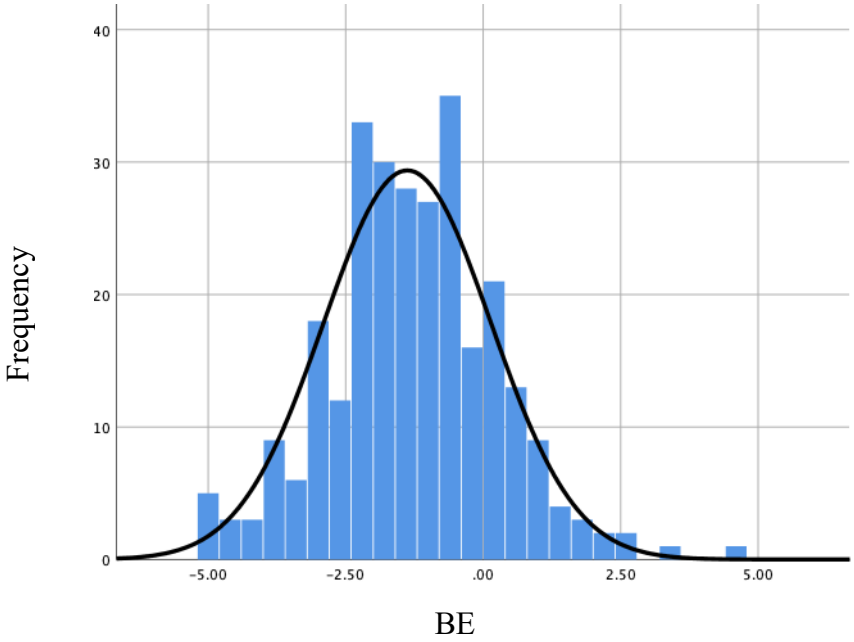

Figure 3. Frequency histogram of bandwagon effect (*M* = -1.38, *SD* = 1.52, *n* = 281). The negative scores expressed the non-bandwagon choice, while the positive scores stated the bandwagon choice.

Regarding to the relation of the variables, there was not a significant correlation between the cognitive reflection and the bandwagon effect, $r = -.006.$, p (one-tailed) = .92 (Figure 4). These results suggested that our first hypothesis could not be confirmed, which means that cognitive effect was not a predictor of bandwagon effect. In this sense, the cognitive style

(intuitive or reflective) would not prognostic whether the person incur on the bandwagon effect or not.

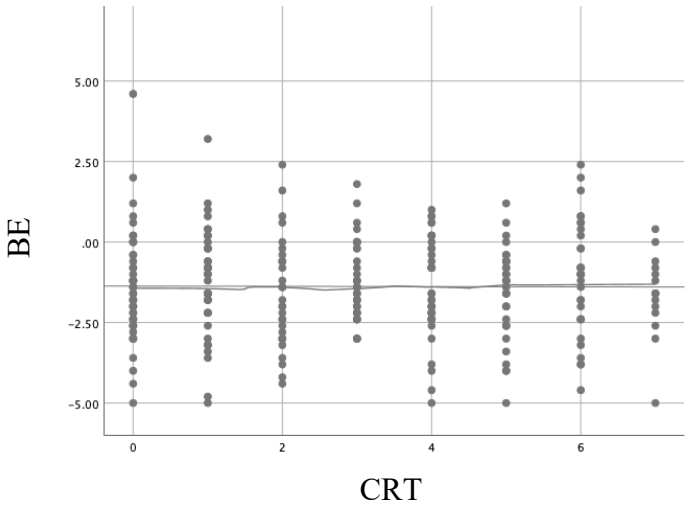

Figure 4. Relationship between cognitive reflection and the bandwagon effect. Pearson's = -.006.

In order to understand if there was a variable that explains better the relationship, we included the need for affiliation as a mediator, testing a mediational model using the bootstrapping method (Preacher & Hayes, 2004). In this model, cognitive reflection was the independent variable, affiliation was the mediation variable, and bandwagon effect was the dependent variable. The mediational model (figure 5) was conducted using the PROCESS for SPSS.

In the first step of the mediation model, the cognitive reflection and the bandwagon Effect, disregarding the mediator, was not negative significant, B = -.006, t(279) = -.09, p =.92 (standardized coefficient). In other words, the cognitive reflection cannot predict the bandwagon effect. The second step showed that the regression of the cognitive reflection on the mediator, need for affiliation, was negative related and significant, B = -.11, t(279) = -1.92, p = .05. This

means that the higher/lower an individual scored in the CRT, the lower/higher was his or her need for affiliation. The third step of the mediation process showed that the mediator (need for affiliation) and the bandwagon Effect, was not positive significant, $B = .01$, $t(278) = 1.66$, $p = .10$. Although the relation between need for affiliation and the bandwagon effect was not significant, it was marginally close to be statistically significant. The forth step was the relation between the cognitive reflection and the bandwagon effect controlling the need for affiliation (mediator), $B = .006$, $t(279) = .09$, $p = .92$. We tested the significance of this indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the unstandardized indirect effect was -.008, and the 95% confidence interval ranged from -.026, .003. Thus, the indirect effect was statistically not significant. All in all, we reject the second hypothesis, in which need of affiliations mediates the relationship between cognitive reflection and bandwagon effect.

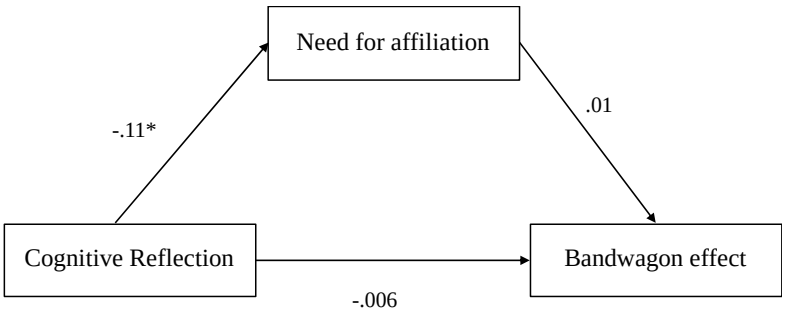

Figure 5. Standardized regression coefficients for the relationship between cognitive reflection and the bandwagon effect mediated by Need for affiliation. $p \leq .05$

As for testing the third hypothesis we conducted two mediations to understand the hypothesis 3a and 3b. In the first model gender was the independent variable, cognitive reflection was the mediation variable, and bandwagon effect was the dependent variable. In the second

model gender was the independent variable, need for affiliation was the mediation variable, and bandwagon effect was the dependent variable. For both models the gender was a dichotomous variable so we coded as a dummy variable (0 = men and 1 = woman).

In the first model, step 1 showed there was not positive significant correlation between gender and the bandwagon effect, $B = .13$, $t(254) = .61$, $p = .54$. In this sense, women and men could incur in the bandwagon effect in the same extend. Step 2 indicated a negative significant correlation between gender and cognitive reflection, $B = -.76$, $t(255) = -2.62$, $p = .01$. This means that women had lower scores on the CRT than men. Step 3 evidenced that there was not a significant relation between the cognitive reflection and the bandwagon effect, $B = .001$, $t(254) = .03$, $p = .97$. Step 4 showed the relation between gender and the bandwagon effect controlling the moderator, $B = .13$, $t(254) = .61$, $p = .53$. We tested the significance of this indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the unstandardized indirect effect was -.001, and the 95% confidence interval ranged from -.29, .55. Thus, the indirect effect was statistically not significant. All in all, we reject hypothesis 3a, in which cognitive reflection mediates the relationship between gender and bandwagon effect.

In the second model, in step 1 there was not a significant correlation between gender and the bandwagon effect, $B = .12$, $t(254) = .61$, $p = .53$. This means that there is not a significant difference between men and women in the need for affiliation. Step 2 implied there was not a negative significant correlation between gender and need for affiliation, $B = -.39$, $t(255) = .34$, $p = .73$. Step 3 showed that there is not a significant relation between the need for affiliation and the bandwagon effect, $B = .01$, $t(254) = 1.51$, $p = .13$. Step 4 showed that even controlling the

mediator, there is not significant relationship between the gender and the bandwagon effect B = .12, $t(254) = .58$, $p = .56$. We tested the significance of this indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the unstandardized indirect effect was .006, and the 95% confidence interval ranged from -.29, .53. Thus, the indirect effect was statistically not significant. All in all, we reject hypothesis 3b, in which the need for affiliation mediates the relationship between gender and bandwagon effect.

Exploratory analyses

Although the results in hypothesis 3a and 3b showed that gender did not differ between need for affiliation and the bandwagon effect, we did want to look closer to these differences in order to compare them to the literature. Frederick (2005) compared the CRT between gender and found that males had a higher score than females. In order to replicate these findings, an independent-sample t-test was conducted to compare the cognitive reflection for men and women. There was a significant difference in the scores for men (M= 3.50, SD= 2.17) and woman (M= 2.74, SD= 2.11); $t(255)$= 2.62, $p = .009$, $d = 35$. This is in line with prior findings in the literature (Cueva, et al, 2016; Frederick, 2005; Ring, Neyse, David-Barett & Schmidt; 2016). This means that men score higher in the cognitive reflection test than women.

Additionally, we replicate Wong & Csikszentmihalyi (1991) results, which determined that women have high need for affiliation than men. To compare the need for affiliation an independent-sample t-test was conducted. Although women scored higher than men, we found a non-significant difference in the scores for men ($M = 28.09$, $SD = 9.00$) and woman ($M = 28.48$, $SD = 8.23$); $t(255)$= -.34, $p = .73$, d = -0.04 This finding differs from previous researches.

Table 2

Results of the Independent t-test and Descriptive Statistics for CRT, need for affiliation and bandwagon effect according to gender.

Outcome	M_{Men}	SD_{Men}	M_{Women}	SD_{Women}	T test
Cognitive Reflection	3.05	2.17	2.47	2.11	2.62*
Need for affiliation	28.09	9.00	28.48	8.23	-.34
Bandwagon effect	-1.47	1.55	-1.34	1.54	-.64

* $p < .01$.

Moreover, to make sure our data did not have inconsistencies and that the results are valid, we conducted some exploratory analyses (mostly replications from previous papers). In that way, we replicate some of the analyses made by Frederick (2005) regarding the relationship between CRT with risk preferences, time preference and gender.

We replicate this part of the study, but unlike Frederick (2005) we managed to use the cognitive reflection variable as continuous instead of categorizing the scores as he did. This is possible because Frederick (2005) had two groups (high and low CRT score). If there is a significant difference between two groups, then there is a linear relation between them ($r = t$) (Dutilleul, Clifford, Richardson, & Hemon, 1993). For our analyses the certain option was coded as 0 the risky option was coded as 1.

Therefore, for the domain of gains and higher expected value gambles, we did not find a significant correlation between CRT and the risk preference. This means that there was no

difference between the CRT groups. However, the relation was negative which means that people with lower cognitive reflection preferred the risky option and people with higher CRT preferred the certain option, which is opposite from what Frederick (200%) found. For the domain of gains and lower expected value gambles, we did not find a significant correlation between CRT and the risk preference. Likely to Frederick, there was no significant difference between high and low CRT scored regarding to the risk preference in this item. Finally, for the domain of loss and lower expected value gambles, we found a negative correlation for both items. This means that individuals with high cognitive reflection preferred the certain option, while individuals with low cognitive reflection preferred the risky option. Although, this was in line with Frederick's finding, we found that there was a significant correlation just in one of the items (the second one), which means that we did not find a statistically significant difference between the risk preference between both groups in the fourth item, as Frederick (2005) did. Table 3 summarizes the correlations between the risk items and the cognitive reflection.

Table 3

Results of the Correlation between cognitive reflection Test and Risk choice.

Correlation between CRT and Risk choice		
Riskier option	Item	β
Certain gains vs. Higher expected value gambles	1. $100 for sure or a 75% chance of $200	-.064
Certain losses vs. Lower expected value gamble	2. Lose $100 for sure or a 75% chance to lose $200	-.177**

Certain gains vs. Lower expected value gamble	3. $100 for sure or a 3% chance of $7,000	.046
Certain losses vs. Lower expected value gamble	4. Lose $100 for sure or a 3% chance to lose $7000	-.066

** p < .001.

Frederick (2005) also found that CRT scores were related to the time preferences. In this sense, people with low CRT scores would prefer immediate reward ($3400 this month) and people with high CRT scores would prefer a larger delayed reward ($3800 next month). Following the same logic proposed before in the Risk preferences and based on Dutilleul, Clifford, Richardson, & Hemon (1993), we conducted a correlation to replicate Frederick's findings with our data. As shown in table 4, None of the items had a significant correlation, which means that low CRT group and high CRT group did not have significant differences. According to our results, intuitive individuals would prefer immediate reward over a larger delayed reward in the same extent than reflective individuals.

Table 4

Relation between CRT and time preference items

Correlation between CRT and Time preference	
Intertemporal Choice or judgment	β
1. $3400 this month or $3800 next month	.144
2. $100 now or $140 next year	.071

3. $100 now or $1100 in 10 years	.048
4. $9 now or $100 in 10 years	.053

* $p < .05$.

Finally, in the exploratory analyses of the data we found that cognitive reflection and affiliation were related with age. In this sense, the older/younger a person is, the higher/lower he will score in the CRT and the lower/higher the need for affiliation would be (table 5).

Table 5

Correlations found between CRT, need for affiliation, bandwagon effect and age

Measure	1	2	3	4	Mean	SD
Cognitive Reflection	1	-.11	-.006	.13*	3.04	2.19
Need for affiliation	-.11*	1	.01	-.17**	28.44	8.44
Bandwagon effect	-.006	.01	1	0.63	-1.38	1.52
Age	.13*	-.17**	0.63	1	27.13	9.90

N = 281. Cognitive reflection = 1; Need for affiliation = 2; Bandwagon effect = 3; Age = 4.

*$p < .05$, * *$p < .01$.

Discussion

Prior research related the bandwagon effect to personal characteristics such as vanity, conformity, status seeking, and low need for uniqueness (Kastanakis, 2010; Van Schalkwyk, 2014). This means that certain individuals are more prone to follow others. In this sense, the bandwagon effect affects rational decision making just like any other bias. Toplak, West and Stanovich (2011) studied an extensive list of heuristics and biases and their relationship with the cognitive reflection. However, there is no evidence in the literature of researches that studied the

bandwagon effect in relation to the cognitive style. For that reason, the aim of this study was to understand the relation between these variables.

The main outcome of this study was that cognitive reflection did not predict the bandwagoner response or preference of an individual, rejecting our first hypothesis. A reflective person and an intuitive person were both prone to follow others in the same extent. On the other hand, literature has provided evidence that imitating others can be based on automatic responses, which are associated with system 1 or intuition (Schilbach, Eickhoff, Rotarska-Jagiela, Fink, & Vogeley, 2008). This differs from our results because cognitive reflection does not act in accordance with the mechanisms that predicts the bandwagon outcome. We suggest that the bandwagon effect contrasts from merely imitation, contagion or social default because it is not automatic. In this sense, the bandwagoner puts effort on the decision because s/he is pursuing a goal, most of the time a social goal.

A marginal significant relationship was found between the bandwagon effect and the need for affiliation (this will be further explained in the limitations section). Even if our data did not draw the conclusive relation between the desire to be accepted by a group and the action of following others, previous researches support this link. Literature shows that personal characteristics have been linked to the bandwagon effect, most of them are associated to fulfill the motivation of relating with other individuals (Wan, Xu, & Ding, 2013). For instance, the higher the need to belong, the more prone a person is to follow the bandwagon effect (Shaikh, et al., 2017). We suggest that this is associated to the cognitive effort mentioned before; individuals choose to not follow others because it is the easy and effortless option, but instead because they want to feel part of a social group.

Additionally, it is very important to remark the difference between the need to belong and the need to affiliate. The first concept relates to keep the existent relations with others, and the second bases in the new relationships that individuals want to create (Leary, 2010). Therefore, the bandwagon effect has been related to the need of belonging to a group (Kastanakis, 2010), because people want to be part of a group and consumption helps to maintain the bond. Although following trends can be useful to connect with new people, we suggest that the bandwagon effect can be more effective to maintain a relation to a group than to create a relation for the first time.

Moreover, motivation drives can be characterized by information-processing biases sensitivity (Crocker, et al., 2013). As for this study, the motivation to affiliate with others was predicted by the cognitive reflection. Additionally, there are studies that have shown the relation between social heuristics and cognitive reflection, which means that intuitive people are more cooperative than reflective individuals. Likewise, cooperation is a way to affiliate or bond with others (Arora, Peterson, Krantz, Hardisty, & Reddy, 2012). In line with previous findings, we found that cognitive reflection was negative related with the need for affiliation, which means that individuals with high/low CRT scores would have lower/higher need for affiliation. In this sense, intuitive individuals would seek the way to be part of a social group and/or make bonds with others in a greater extent than reflective individuals. This was confirmed also when we analyzed the relation between CRT, need for affiliation and age. Younger/older people would be more intuitive/reflective and seek more/less for the approval of others.

In conclusion, we did not find neither a direct nor an indirect effect between cognitive reflection and Bandwagon effect, when the need for affiliation was a mediator. Conversely,

some studies found that social cues will activate the bandwagon heuristic and increase positive attitudes towards a place (Kim, Brubaker, & Seo 2015; Kim & Gambino, 2016). However, it can be possible that bandwagon effect is stronger in services than in products. A study showed that when people want to bond to others, they will share the experiences they "consumed" (e.g. BBQ party) instead of talking about a product they purchased (e.g. BBQ grill) (Bastos & Brucks, 2017). This happens because experiences are visible to the public, while some products - especially the ones we used in this study - are not.

We supposed that the cognitive reflection played a role in the relation between gender and the bandwagon effect. Nonetheless, we reject hypothesis 3a because the relationship between cognitive reflection and the bandwagon effect did not differ between men and women and the bandwagon effect was not statistically different between gender (figure 6). In this sense, we discard the cognitive reflection as part of the mechanism of following trends for both women and men. Moreover, we found that the bandwagon effect was not statistically different between gender, which means that women and men are both prone to follow – or not- others in the purchasing process. Although in consumer science has not studied the difference of the bandwagon effect between gender, other field have compared the bandwagon of men and women. For example, Mehrabian (1998) showed that the bandwagon effect was stronger for women than men when voting.

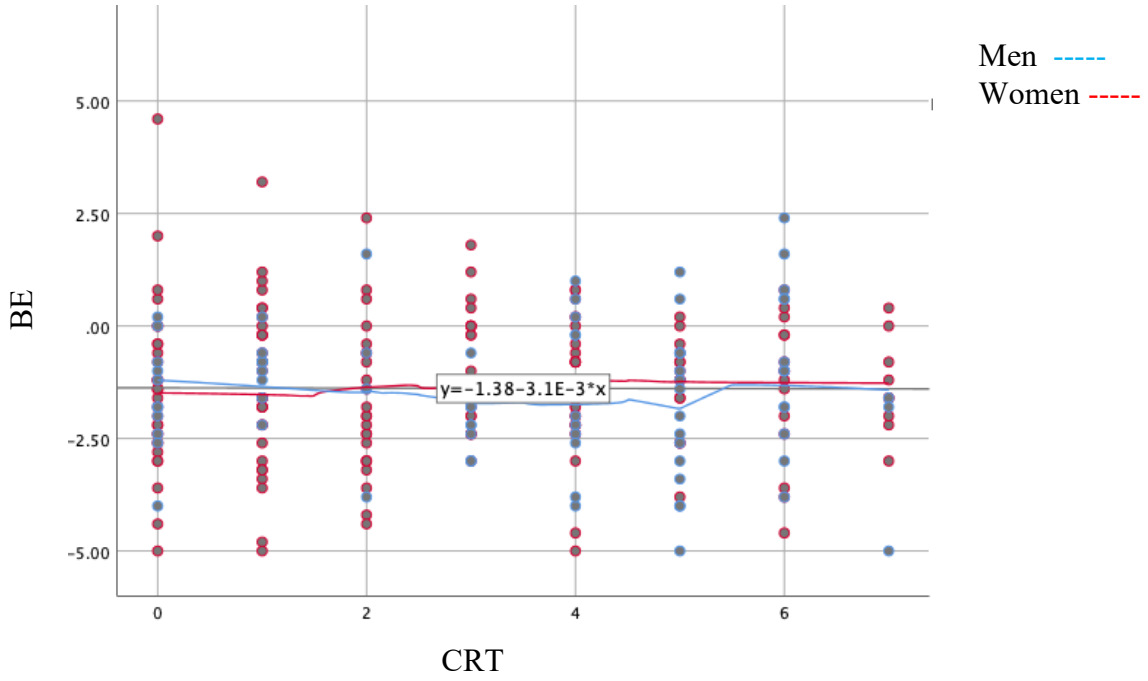

Figure 6. Gender difference in the relationship between cognitive reflection and the bandwagon effect

Similarly, we found that there was no difference in the relation between need for affiliation and the bandwagon effect for women and men (figure 7). In this way, need for affiliation does not mediates the relationship between gender and the bandwagon effect, so we reject our hypothesis 3b. Although these specific variables have not been studied, literature demonstrated that women have higher need for affiliation and that this is related with the interdependency that women have when buying a product (Cross & Madson1997; Wong & Csikszentmihalyi, 1991). Moreover, we did not find a difference between gender in either the bandwagon effect or the need for affiliation. This finding is contrasting to studies that show that women are have a higher need for affiliation than men (Schultheiss, Wirth & Stanton, 2004).

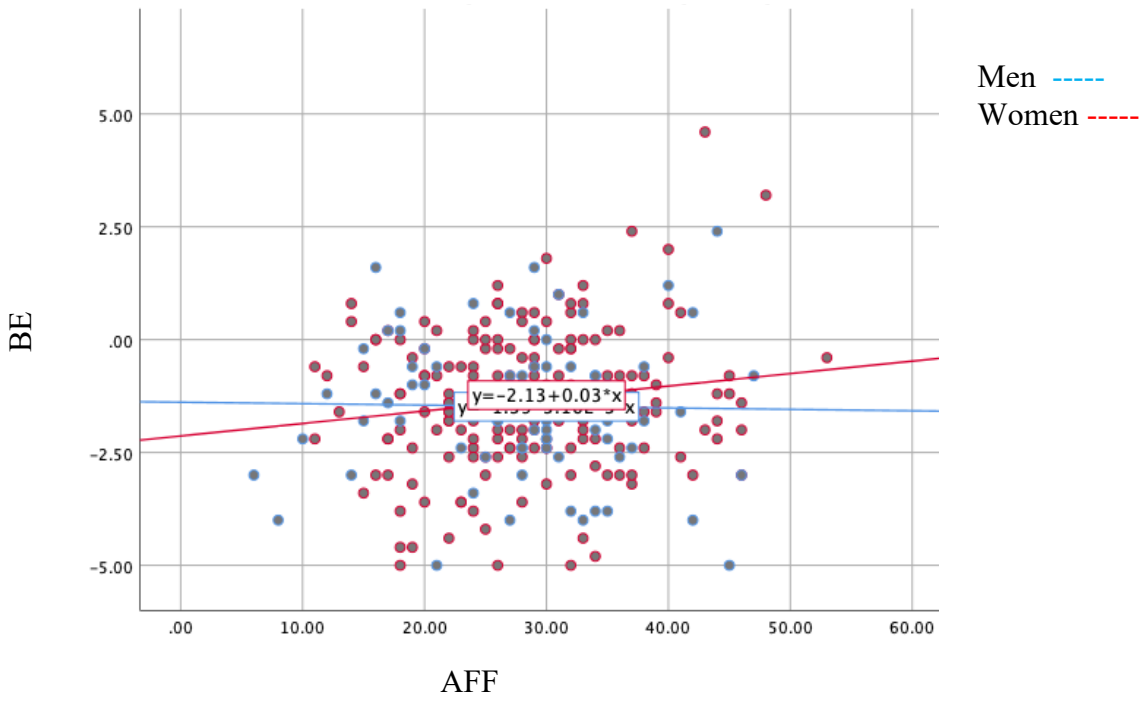

Figure 7. Gender difference in the relationship between need for affiliation and the bandwagon effect

We propose that men are women are equally prone to follow in the bandwagon effect because the mechanism behind the bandwagon effect is not related wit gender. However, we believe that the reasons to incur in the bandwagon for both women and men are different, and mostly related to the social goals of each group. For example, women would incur in the bandwagon effect to connect emotionally with other individuals, while men would follow others to show power and prestige in a group (Lodewijkx, van Zomeren, & Syroit, 2005). Therefore, gender did not explain the mechanism of this effect, so we suggest that there are other variables that activates the bandwagon effect and that could explain why people is more prone to follow others.

Limitations and further research

A number of possible methodological limitations can be identified within the study. Regarding the instruments, both the bandwagon effect and the need for affiliation tool could have affected the results of the study. In the literature, there is no evidence of a scale that measures to what extent a person is a bandwagoner – or not-. Dr. Kastanakis is developing a tool which determines the bandwagon effect in luxurious products, but it has not been tested for reliability and validity. For this reason, we measure the bandwagon like other studies did (Ackerman, & Chung, 2017; Huh, Vosgerau, Morewedge, 2014; Thoma, & Williams, 2013; Xu & Fu, 2014), using a two-choice preference instrument with the bandwagon and non-bandwagon option. Furthermore, the instrument could have low reliability, which could explain the sample distribution of the bandwagon effect. To overcome this, the next studies could develop a reliable and validated instrument to study this phenomenon.

Likewise, the need for affiliation has been measure with projective techniques in different researches. One of the most recent developed scales to measure this construct was taken from Hill (1987), which allowed quantifying the construct. However, the scale was not used completely due to its length and only the items with the highest Cronbach's coefficients were included. Excluding items could result in decreasing the reliability of the instrument. We do not completely discard that it could be a connection of the affiliation as a motive and the bandwagon, but more reliable instruments should be used in further research.

In order to give alternative explanations, we will go back and check bandwagon effects assumptions. Most of the literature points out that this effect is prevalent in luxurious products. Even so, the literature shows that bandwagon effect doesn't only happen in luxury markets, but in non-luxurious products when there is an absence of knowledge of the product attributes (Xu & Fu, 2014). We used non-luxurious products from a list of other products already tested by Thoma & Williams (2013). However, there could exist a bias from the researcher to classify the products according to their luxury. In this sense, further research may also benefit from providing a more detailed view comparing the bandwagon effect in luxury and non-luxury products.

The other assumption which is highly relevant for the bandwagon effect relies on the group of reference. Some authors explain that people are prone to the bandwagon effect due to the desire of being part of a social group, which gives them social status. Even if the buying process is not noticeable for others, the consumption must be visible to the group, like choosing a certain brand of clothes and wearing them (Tynan, McKechnie & Chhuon, 2010; Eckhardt, Belk, & Wilson, 2015). This would ensure that the bandwagon effect has a social reward, like belonging to a group. In this study, the ‘reference group’ was unknown and there was not an explicit reward, which could also be the reason why most of the people chose the non-bandwagon option. This could be improved by recreating a real consumption context in which individuals note their social reward.

Mediation analysis has some disadvantages that could also lead to interfering with the results. However, we had some of the basic assumptions Jeon (2015) mentioned in order to successfully carry on this statistical model. First, we used continuous variables to be sure that the coefficients would not inflate. Second, our sample size was more than 20 times larger than the

number of expected paths which guarantee a reliable result. To understand if a variable is certainly acting as a mediator, Fiedler, Schott & Meiser (2011) proposed to carry on an experimental manipulation. This could also be executed for further researches to confirm the pattern of correlations in a model. In this sense, maybe the relational path could be different because the mediation suggest not only correlation but causality in the analysis.

Other limitation of this study was the previous exposure to the cognitive reflection Test some participants had. Overall, 30% of the participants knew more than one question before participating in this study. However, some studies have shown that multiple exposures to the CRT do not guarantee an improvement in the score (Meyer, Zhou, & Shane, 2018). Scientist have not found the reason for to explain this, but according to Bialek & Pennycook (2017) people overestimate their score in the CRT. Even if they are exposed previously to the test, their result would not improve in a significant way. This was evident in our study because after subtracting the number of questions known to the CRT score, there were negative results. In this sense, although people were exposed to the cognitive reflection test before, they will make mistakes when answering to it.

Implications

This study contributed to marketers and advertisers to understand that the cognitive styles are detached from the desire to follow other people. In this way, rational advertising would have less impact and effectiveness than emotional/affiliative advertising. Some successful brands, such as Apple, project the idea that when you buy their product you are part of a social group, despite the technical issues of the product. In this case, either reflective or intuitive individuals can be seduced by ‘the social benefits’ of a product.

As Page (1992) described, the bandwagon effect has strengthened since the 50's and nowadays the effect is even more notorious by the fact that social media allows us to see decisions made by others (Sundar, Knobloch-Westerwick & Hastall, 2007). Understanding that determined information has a relevant role in decision-making is insightful to the advertising industry. In this way, marketers can use -or not- some information in order to sponsor their product. Also, understanding some individual characteristics of bandwagoners could be useful in the segmentation of a market and consequently can improve the way they elaborate on the PR. This could also mean that following trends or having and preference are emotionally driven, more than rationally driven. In this sense, some campaigns can be more effective if there is a social benefit instead of a list of facts.

Although the relationship between the bandwagon effect and the need for affiliation were not conclusive, there is an approximation of how these variables can be studied. Hence, the impact of understanding this association opens the gate to study how social relations are shaping consumption and the other way around. Regardless of the cognitive reflection of an individual, if basic needs are covered by products, people might reduce direct human socialization (Mourey, Olson, & Yoon, 2017).

The study can also provide contributions to other fields of psychology, for example through the way individuals want to be approached (e.g. in a learning context or in therapy). Individuals with different cognitive styles have differences in the ways they relate to other individuals. In this sense, people with low cognitive reflection would search for more approval from others and would seek to be surrounded by others, whilst people with high cognitive reflection are more independent.

Conclusion

Finally, the aim of this study was understanding the relationship between cognitive Reflection, need for affiliation and the bandwagon effect. The main finding suggests that cognitive reflection could not predict the bandwagon effect, not even when the need for affiliation mediated the relationship. Moreover, gender did not play a role in the relationship between the bandwagon effect and the cognitive reflection or the need of affiliation. This means that women and men are influenced to follow others in the same extent. In this sense, the mechanism that underlies the bandwagon effect is independent from the cognitive style of individuals and the need to create bonds with others. It is assumed that the reference group and the type of product or service is determinant to understand the mechanism of the bandwagoners choice.

However, cognitive reflection resulted a significant predictor of the need for affiliation. In this sense, intuitive individuals will seek for social approval and social connection in a greater extent than reflexive individuals. Besides de implications in marketing and decision making, this finding has implication in different fields such as education, psychotherapy and social psychology.

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Appendix A

Cognitive reflective test (CRT):

1. A bat and a ball cost $1.10 in total. The bat costs a dollar more than the ball. How much does the ball cost? ____ cents [Correct answer 1⁄4 5 cents; intuitive answer 1⁄4 10 cents]

2. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? ____ minutes [Correct answer 1⁄4 5 minutes; intuitive answer 1⁄4 100 minutes]

3. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? ____ days [Correct answer 1⁄4 47 days; intuitive answer 1⁄4 24 days]

4. If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together? _____ days [correct answer 1⁄4 4 days; intuitive answer 1⁄4 9]

5. Jerry received both the 15th highest and the 15th lowest mark in the class. How many students are in the class? _____ students [correct answer 1⁄4 29 students; intuitive answer 1⁄4 30]

6. A man buys a pig for $60, sells it for $70, buys it back for $80, and sells it finally for $90. How much has he made? _____ euros [correct answer 1⁄4 $20; intuitive answer 1⁄4 $10]

7. Simon decided to invest $8,000 in the stock market one day early in 2008. Six months after he invested, on July 17, the stocks he had purchased were down 50%. Fortunately for Simon, from July 17 to October 17, the stocks he had purchased went up 75%. At this point, Simon has: a. broken even in the stock market, b. is ahead of where he began, c. has lost money [correct answer 1⁄4 c, because the value at this point is $7,000; intuitive response 1⁄4 b].

Appendix B

Bandwagon effect instrument

Instructions: You are going to see some products with their corresponding information, such as price, size, quality and best sellers (most popular products according a world

ranking). After you see this, please click on the object you would be likely to buy. You can also choose the option “I don’t care” if you don’t prefer any product. Example:

This means that you are more likely to buy the product A in some extent.

Product A

★★★

Product B

★★★★★

Likely to buy product A					I don't care					Likely to buy product B
0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

Product A

Price: € 300

Product B

Price: € 370

Likely to buy product A					I don't care					Likely to buy product B
0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

Product A

Three-month guarantee

Product B

One-year guarantee

Likely to buy product A					I don't care					Likely to buy product B
0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

Product A

2 teas for € 24

Product B

1 tea for € 24

Likely to buy product A					I don't care					Likely to buy product B
0	1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○	○

Appendix C

Affiliation instrument

Instructions: For each of the statements below, indicate the degree to which you agree or disagree with the statement by writing a number in the space beside the question using the scale below:

1 Strongly disagree

2 Moderate disagree

3 Neither disagree nor agree

4 Moderate agree

5 Strongly agree

1. If I feel unhappy or kind of depressed, I usually try to be around other people to make me feel better.
2. One of my greater sources of comfort when things get rough is been with other people.
3. When I have not done very well on something that is very important to me, I can get to feeling better simply by being around other people.
4. I often have a strong need to be around people who are impressed with what I am like and what I do.

5. I often have a strong desire to get people I am around to notice me and appreciate what I am.
6. I like to be around people when I can be the center of attention.
7. I think being close to others, listening to them, and relating to them on a one-to-one level is one of my favorite and most satisfying pastimes.
8. One of the most enjoyable things I can think of that I like to do is just watching people and seeing what they are like.
9. I would find very satisfying to be able to form new friendships with whomever I liked.
10. I seem to get satisfaction from being with others more than a lot of other people do.
11. When I am not certain about how well I am doing at something, I usually like to be around other so I can compare myself to them.
12. I find that I often look to certain other people to see how I compare to others.

Supplementary Information

Supplementary Data

We conducted three exploratory analyses that are not directly solving the research question but might be related and could be studied in depth in future research. In the first analyses, we compared two groups: people who made the survey in Dutch and people who made the survey in Spanish. Although we did not ask for country of origin, we are going to assume that people who filled the survey in Dutch are original from The Netherlands and people who filled the survey in

Spanish are from Latin America. We can make this assumption due to the places we shared the link to complete the survey.

Santamaría, Hansen & Ruiz (2010) found that people in North Europe are more independent and people in Latin American countries are more interdependent. Moreover, we mentioned in the introduction that interdependent individuals were more prone to fall in the Bandwagon effect and have higher levels of affiliation. Nonetheless, we did not find a significant difference between Dutch speakers and Spanish speakers in the Bandwagon effect nor need for affiliation like shown in the table 6. We did not find a significance difference between the CRT scores, but it was close to be significant.

Table 6

Comparison between Dutch speakers and Spanish speakers in the cognitive reflection, need for affiliation and bandwagon effect.

Outcome	M_{Dutch}	SD_{Dutch}	$M_{Spanish}$	$SD_{Spanish}$	T test	p
Cognitive Reflection	3.29	1.96	2.42	1.95	.007	.056
Need for affiliation	28.05	7.79	27.41	9.36	1.24	.77
Bandwagon effect	-1.24	1.37	-1.40	1.90	5.53	.65

This analysis leaves an opportunity for further research to confirm weather independent cultures have higher CRT scores, and if this is also related with the need of affiliation according to the culture.