

**Word of mouth: How upward social comparisons influence the sharing of consumption experiences**

**Proposed short title: Upward social comparisons and sharing of experiences**

Ana Suárez Vázquez<sup>a\*</sup>

Li Du<sup>b</sup>

Ana Belén del Río Lanza<sup>a</sup>

<sup>a</sup>Oviedo University

School of Economy and Business

Avda. Del Cristo s/n 33071 Oviedo (Asturias)

Spain

[anasv@uniovi.es](mailto:anasv@uniovi.es)

[adelrio@uniovi.es](mailto:adelrio@uniovi.es)

<sup>b</sup>Xidian University

School of Economics and Management

2 South Taibai Road, Xi'an, Shaanxi (710071)

China

[duli0919@sina.com](mailto:duli0919@sina.com)

\*Corresponding author: email: [anasv@uniovi.es](mailto:anasv@uniovi.es), Phone: +34985102821

**Funding details**

The authors would like to thank the Ramón Areces Commercial Distribution Chair for financing a mobility grant of professors Suárez and Du on early stages of this project. This work was supported by the Ministry of Economics, Industry and Competitiveness of Spain Government [ECO2016-76783-R] and the University of Oviedo [PAPI-19-EMERG-15].

**Data availability statement**

The data set is available from upon request from the corresponding author.

**This is an Accepted Manuscript of an article published by John Wiley & Sons Ltd  
in Journal of Consumer Behaviour on November 2020 available at  
<http://dx.doi.org/10.1002/cb.1902>**

**Word of mouth: How upward social comparisons influence the sharing of consumption experiences**

**Proposed short title: Upward social comparisons and sharing of experiences**

Abstract

An outcome of upward social comparisons that has been largely overlooked is its effect on non-transactional behaviours (i.e. word of mouth). Previous research has identified three different emotional reactions to upward social comparisons: admiration, benign envy and malicious envy. Despite the fact that their effect on consumption has been previously analysed, it remains unclear how these reactions affect word of mouth intention. This study carries out an experimental design that demonstrates that admiration and benign envy positively influence word of mouth behaviour. However, there is no effect of malicious envy on such disposition. The results are sustained under different cultural contexts. The findings shed light on the drivers of word of mouth. They offer guidance to companies for developing more effective strategies to encourage both brand message sharing and consumer-to-consumer sharing of consumption experiences.

Keywords: word of mouth, social comparisons, benign envy, malicious envy, admiration

## **Introduction**

Consumers are driven by self-evaluation of their opinions and abilities and one way to satisfy that need is the comparison with other people (Festinger, 1954). An upward social comparison occurs when there is a negative self-other discrepancy (Salerno et al., 2019) that leads to feelings of envy (Smith, 2004). Envy that follows upward social comparisons has many consequences on daily life (Smith et al. 1999). These effects are mediated by the degree in which negative emotions —such as hostility and anger— go hand in hand with envy (Hareli and Weiner, 2002). The presence or absence of negative emotions accompanying envy allows to differentiate between two types of envy: benign envy and malicious envy. In the case of benign envy, motivational tendencies are productive while, for malicious envy, motivational tendencies are destructive (Van de Ven et al., 2010). That is, benignly envious people try to improve themselves while maliciously envious people try to degrade the superior other (Van de Ven et al., 2009).

The distinction between benign envy and malicious envy seems to have relevant consequences in the field of consumption. Thus, for example, previous studies on the relationship between types of envy and willingness to pay demonstrate that for benign envy there is an envy premium for products owned by others, while for malicious envy that envy premium exists for products not owned by others (Van de Ven et al., 2011a).

To date, research investigating the effect of upward social comparisons on consumption has primarily focused on the impact of feelings of others' superiority on consumers' desire for others' possessions (Van de Ven et al., 2011a). Indeed, consumption expenditure can be a way of satisfying the desire of emulating others who are better off. Economists have labelled this phenomenon as the "bandwagon effect" (Leibenstein,

1950) or “keeping-up-with-the Joneses” (Frank, 1999) and it is still helpful to explain buying intention in the novel context of Instafamous-based social commerce (Jin and Ryu, 2020; Lee and Eastin, 2020).

One outcome of upward social comparisons that has been largely overlooked is its effect on non-transactional behaviours (i.e. word of mouth). Interpersonal communication, known as word of mouth, has been studied considerably in the fields of social psychology and consumer behaviour. Consider Jane, an undergraduate student, that received the latest iPhone model for her birthday and shows it to Carol, one of her classmates that owns an outdated version of the same phone. Research predicts that (consciously or unconsciously) Carol is going to compare her phone to Jane’s and, as a result of this comparison, three responses are possible in terms of consumption (Van de Ven et al., 2009; Van de Ven et al., 2011b; Salerno et al., 2019): (a) Carol experiences admiration, that is, positive feelings that increase a sort of passive inspiration but not leading to motivation to improve herself; (b) Carol experiences benign envy, and so she desires to buy the same phone as Jane; (c) Carol experiences malicious envy, as a consequence she desires to buy a different brand to show that Jane’s phone is not so good. We are interested in how these different reactions to upward social comparisons (admiration/benign envy/malicious envy) will subsequently affect not consumption but the intention of Carol to share the latest acquisition of her classmate. That is, this study proposes to explore the following research question:

How an upward social comparison in the consumption sphere affects word of mouth intention related with the consumption experience that triggered the comparison?

To date, this research question has not been addressed. Its relevance rests on the long-recognized influence of word of mouth on purchase behaviour (Ditcher, 1966), even more

so in the current digital era (Stephen, 2016). Although message characteristics, and the psychological motivations they can influence, have been signalled as causal bases of word of mouth (Cappella et al., 2015), the literature has given more importance to consequences than to drivers of this phenomenon (Berger and Schwartz, 2011). The increase in the research response to the call for exploring the motivations behind word of mouth is quite recent (Chen, 2017). Understanding the factors that underlie the spread of word of mouth is of paramount interest against a backdrop characterized by increasing investments in word of mouth marketing (Hu et al., 2019). The social media explosion has attracted researchers to turn their attention to the social motivations of word of mouth (Baek et al., 2017) and to the effect of social media envy (Liu et al., 2019). In particular, the type of relationship between the parties involved in an upward social comparison is drawing increasing importance (see, for example, Dubois et al. (2016) or Hu et al. (2019)). In this paper we dig deeper into the social drivers of word of mouth by analysing how the perceived position of the consumer in relation to the content of the information that is shared affects word of mouth. Understanding how different responses to upward social comparisons influence word of mouth is a task of academic interest and managerial importance, especially in a context characterized by a noteworthy growth of impression management tools (Lee and Eastin, 2020).

This paper aims to explore the effect of upward social comparisons on word of mouth intention. In keeping with this objective, the paper hypothesizes that different types of responses to upward social comparisons have different potential as drivers of word of mouth. Our reasoning is based on previous findings on behavioural tendencies spurred by envy and on the literature on emotional communication. An experimental study was carried out based on a sample of 120 Spanish participants and 120 Chinese participants.

Data of the experiments were used to estimate structural equation models that represent the relationship between experiencing different types of envy and word of mouth intention. Multisampling analysis is used to check the validity of the results in different cultural contexts.

## **Conceptual background and hypotheses development**

### *Literature review on envy and consumption*

Literature about how envy that follows upward social comparisons affects consumption is scarce, especially compared to the level of attention paid to other emotions (Anaya et al., 2016; Kao, 2019). In the particular case of benign envy, empirical evidence is even more scant (Zeng et al., 2020). The consideration of envy as a social taboo has been pointed out as a possible cause of its neglect by scholars (Duffy et al., 2008). Actually, if we use a bibliometric approach to glean insight into the aspects that have been the focus of previous studies, we can confirm the dearth of research on envy. In fact, if we look for peer-reviewed papers in the Web of Science database, entering “envy”, “consumption” and “consumer” as keywords, and after screening irrelevant records, we can only achieve a corpus of 77 papers published in English. Following the methodology proposed by Cobo et al. (2011), and performing a co-words analysis by using SciMAT software (Cobo et al., 2012), we can distinguish between two periods in envy literature. Period one covers papers published before 2014 and the central theme of envy research during this period was consumption, including topics such as envy and luxury consumption, envy and customer satisfaction or envy and services consumption. After 2015, the number of papers is approximately the same as in period one, and the most significant theme is self-

consciousness, which includes all keywords associated with different self-conscious emotions, such as envy and its different types (benign and malicious), admiration, pride or shame. A distinctive feature of period 2 is that social media appears as a relevant keyword, due to the focus of many researchers on the effects of upward social comparisons during social media browsing. In Figure 1 and Figure 2 we can observe the thematic network of each period. The most significant theme occupies the central position on each graph. The volume of the spheres is proportional to the number of documents corresponding to each topic and the thickness of the link between two spheres is proportional to the co-occurrence frequency of two keywords in the corpus of manuscripts considered as bases for the analysis. Thus, in period 1, the most relevant connections are between consumption and social comparisons, and individual differences in topics related to branding and social comparisons. In period 2, the strongest connections appear in the relation between self-conscious emotions and social comparisons and self-conscious emotions and affective consequences. Therefore, this paper opens a new line of research by considering the specific influence of different types of envy on word of mouth. It offers a bridge between the research themes of period 1 and period 2, by analysing the effect of different types of self-conscious emotions that follow social comparisons and the spread of information about consumption experiences.

Figure 1 Salient themes in envy research before 2014

Figure 2 Salient themes in envy research after 2015

*Hypothesis development*

## Reactions to upward social comparisons

Envy occurs when “...a person lacks another’s superior quality, achievement, or possession and either desires it or wishes that the other lacked it” (Parrott and Smith, 1993, 906). Previous literature has differentiated between two types of envy (Van de Ven et al., 2009): benign envy —also known as white or motivational envy— and malicious envy —referred to as “proper” or destructive envy— (Wobker and Kenning, 2013). Both varieties of envy have a different experiential content and are accompanied by distinct motivational tendencies (Van de Ven et al., 2010; Lee and Eastin, 2020). Thus, benign envy is followed by the desire to emulate the superior other, while malicious envy leads to wishes of destroying the better-off other. It is important to highlight the fact that in spite of the “good” intentions that follow benign envy, it implies a certain frustration. The frustration experienced is relevant because it differentiates benign envy from the pleasant experience that accompanies admiration. This nuance signifies that frustration challenges the individual to improve, motivating performance and self-efficacy. Therefore, as a consequence of the frustration that accompanies benign envy, this type of envy can be considered the most productive in terms of implications for the self. It is, in fact, even more productive than the virtue of admiring someone (Van de Ven et al., 2011b). Therefore, an upward social comparison can result in three emotions followed by three types of action tendencies (Smith, 2004; Van de Ven et al., 2010). First, it can derive into a pleasant experience of admiration that drives to self-surrender. Second, it can be a source of inspiration in the shape of self-improvement, caused by benign envy. Lastly, it can trigger malicious envy, involving the motivation to harm the envied other.



Several recent studies in the psychological field propose that the distinction between benign and malicious envy is unwarranted and suggest the use of envy as a unitary construct (e.g., Cohen-Charash and Larson, 2017). This line of research advocates the functionality of unpleasant emotions. They consider that the use of adjectives like “benign” and “malicious” are denying the sociofunctional purpose of envy, independently of whether it is linked to socially desirable or undesirable reactions. Thus, the self-improvement motivation that accompanies benign envy does not necessarily imply the use of prosocial means. Moreover, the socially undesirable elements can nevertheless be functional for the envier and society (Lange et al., 2018). The discussion between the conceptualization of envy as a unitary construct or as a two-construct typology is very relevant from a psychological perspective. It should influence the theoretical framework, the design of the methodology and the operationalization of envy (Cohen-Charash and Larson, 2017). In spite of acknowledging the interest of this debate, the conceptualization of envy or the evaluative judgments on its consequences are outside the scope of this paper. Both the one and two-construct perspectives are compatible with the recognition of the diversity of affective, cognitive and motivational consequences (Parrott and Smith, 1993) that can level the difference between the subjects involved in an upward social comparison (Van de Ven et al., 2009). For example, in the field of brand marketing, the distinction between benign and malicious envy has been signalled as helpful to explain the effect of storytelling styles and brand-consumer psychological distance on brand preference (Kao, 2019). We are also interested in the diversity of consequences of benign and malicious envy, in particular in the use of word of mouth as a strategy to deal with self-discomfort that follows an upward social comparison. The labels “benign” and “malicious” are useful in this context to reflect such possible variety.

Expected influence of upward social comparisons on word of mouth

The idea that certain emotions can trigger or deter word of mouth is not new (Stieglitz and Dang-Xuan, 2013). Information sharing can occur as a reaction to an emotion-eliciting event (Rimé, 2009). In fact, sometimes exposure to an emotional condition positively influences the motivation of the individual to seek social contact in order to share his/her experience (Luminet et al., 2000). In this sense, information sharing can diminish emotional distress (Pennebaker, 1989) and, thus, it performs an adaptive function to cope with negative emotions. In the same token, information sharing can be useful to magnify positive emotions (Bradley and Lang, 1994). As we will explain below, the positive or negative nature of the emotion is a relevant attribute to determine its possible influence on the disposition to share the information that causes this emotion. This is particularly interesting when focusing on the specific influence of the emotions that can follow a social comparison.

In general terms, the main factor that determines the social consequences of emotional situations is emotional intensity (Frijda et al., 1992). Emotional intensity refers to “how strongly or with what magnitude an emotion is experienced or expressed” (Morris and Feldman, 1996; 990). However, if we focus on social consequences in the shape of information sharing, emotional intensity is not enough. Berger and Milkman (2012) demonstrated that, apart from the magnitude of the emotion, the emotion per se is also relevant. According to their proposal, information has different chances of being socially transmitted depending on two properties of the evoked emotion: valence —positive or negative— and arousal —the degree of mobilization or activation. Thus, even when common wisdom assumed that negative information has more chances of being shared than positive information, Berger and Milkman (2012) showed that virality can be higher with positive than with negative information. Besides, in the context of purchase behaviour, previous research has demonstrated that benign envy enhances the consumer’s

attitude toward the envied objects (Jin et al., 2019) and can evoke feelings of authentic pride (Sung and Pau, 2019) that lead to more favourable buying intentions (Liu et al., 2019). Hence, to try to extend the knowledge about the consequences of benign envy, the following hypothesis is put forth:

H1. Benign envy positively influences word of mouth intention.

This positive effect is also expected after upward social comparison situations in which the achievements of someone do not seem to be attainable, resulting in feelings of admiration. When achievements seem unattainable, people are not motivated to reach the status of the admired one (Lockwood and Kunda, 1997) but spreading word of mouth may act as a form of compensation (Thomas et al., 2020). Thus, word of mouth can be related to admiration of individuals who are supposed to have power and control in a field (Aleti et al., 2019). Our second hypothesis summarizes this prediction:

H2. Admiration positively influences word of mouth intention.

To anticipate the consequence of envy on word of mouth intention it must be considered that envy is a self-conscious or social emotion (Bagozzi, 2006; Salerno et al., 2019). Self-evaluative processes—that can also be part of basic emotions, such as fear or sadness—are necessarily present in the case of self-conscious emotions (Tracy and Robins, 2004). This means that a condition for experiencing envy is that people become aware that they have failed to reach the lifestyle of others. As was previously mentioned, emotion elicits information sharing. However, in the case of self-conscious emotions of a negative nature, individuals try to hide those emotions, inhibiting the diffusion of the information that

caused that feeling (Rimé, 2009). Under this reasoning, an audience affected by feelings of malicious envy would not be motivated to socially transmit information. In the same way, in the field of consumption, previous research has proved that malicious envy is not as effective as benign envy to enhance buying intention (Loureiro et al., 2020). The counterproductive side of malicious envy derived from upward social comparisons has also been signalled in the distribution channel reward literature (Zeng et al., 2020). The deterrent of word of mouth could be interpreted as a consequence that malicious envy entails the desire to sabotage the advantage of the superior other (Sung and Phau, 2019). The aforementioned arguments lead to the formulation of the following hypothesis:

H3. Malicious envy does not influence word of mouth intention.

#### Cultural differences

Envy appears in every society and in every individual (Foster et al., 1972). An in-depth examination of multicultural differences is beyond the scope of this paper. However, we consider that testing whether these differences exist or not is a good point of departure to delineate a possible avenue to be explored. Furthermore, previous studies have pointed out the importance of examining various cross-cultural contexts when studying envy (Dow, 1981). In the field of word of mouth studies, Asian cultures have been signalled as particularly relevant due to their low tendency to bolster the self (Wojnicki and Godes, 2008). Extant literature predicts cultural differences in the tendency to envy (Brachfeld, 2013) and differences in how each society copes with envy feelings have been shown (Quintanilla and de López, 2013). In the particular context of social networking sites, these differences affect the strategy of sharing self-promoting content. However,

strategies related to the management of information about the others, such as gossiping or withdrawing from the painful envy-triggering source of information, seem more global than cultural (Wenninger et al., 2019). Furthermore, the rate of socially transmitting information holds across cultures (Rimé, 2009). Therefore, the following hypothesis is formulated:

H4. There are no cultural differences in the effect of admiration and the different types of envy on word of mouth intention.

## **Method**

To test the predictions outlined above, an empirical study based on an experimental design was carried out. We examined our main predictions in two different cultures, Spain and China. Figure 3 graphically summarizes the proposed hypotheses.

Figure 3 Research model

Each participant read one scenario. We adapted the stimuli from a study on the difference between envy and admiration (Van de Ven et al., 2011b) while investigating whether these emotions differ in their effect on word of mouth intention.

Each participant was supposed to have run into a fellow student that had been in Buenos Aires (Argentina). This classmate showed him/her a nice photo standing in front of one of the picturesque houses of “La Boca” district. The trip was a prize in a student competition. The classmate was selected for the competition because of his/her excellent

grades and had won due to his/her “remarkable intellectual abilities shown during the completion of a variety of tasks” (Van de Ven et al., 2011b).

Buenos Aires was initially chosen as an aspirational tourist destination as it was the best destination in the world according to TripAdvisor. However, a pre-test showed that Buenos Aires did not have an effect as an aspirational destination for Chinese participants. A qualitative study based on in-depth interviews with subjects with a similar profile to the experiment’s participants showed that European destinations were more attractive for Chinese participants. Therefore, Paris, the fourth best destination in the world according to TripAdvisor, and the Eiffel Tower were selected as stimuli for the Chinese participants. Following the same method used by Van de Ven et al. (2011a), after reading the scenario some of the participants were asked to pretend they had a strong feeling of benign envy, some were asked to imagine feeling admiration and some a strong feeling of malicious envy. Participants were randomly distributed into the three conditions. As similarity influences social comparisons (Festinger 1954), the gender of the supposed fellow student matched that of the participant.

The experimental design took place in one Spanish and one Chinese university. Participants were undergraduate students. They took part in the experiment in exchange for course credits. The fact that student samples tend to be more homogeneous than representative samples (Peterson, 2001) was considered particularly appropriate in this research context. Furthermore, to avoid the possible effect of the subject of the students, all of them were business students (Hanel and Vione, 2016). When examining cross-cultural differences, recruiting students minimizes between-population differences in the level of education (Saucier et al., 2015) and shows less response-bias variance than representative samples (Rammstedt et al., 2013). Moreover, student samples allowed us an additional control of similarity by defining people involved in the social comparisons

as classmates (Cohen, 2001). Participants recruited by alternative procedures, such as online panels, are less likely to pay attention to experimental materials and tend to have lower self-esteem (Goodman et al., 2013). This last characteristic is especially challenging when researching the effects of social comparisons (Liu et al., 2019).

We translated the scenarios into Spanish and Chinese, then a professional translator back-translated them into English to check the similitude to the original stimuli.

240 participants took part in the experiment. Demographic characteristics of the sample are provided in Table 1. The sample is balanced in terms of gender and country. The majority of the participants were between the ages of 18 and 22, which is to be expected given the use of university students.

Table 1  
Sample demographics

## **Results**

To test the effect of upward social comparisons on word of mouth intention (hypotheses H1, H2 and H3), a structural equation model (SEM) was conducted through EQS 6.2. Structural equation models have been extensively used in the study of consumer behaviour (Steenkamp and Baumgartner, 2000; McQuitty, 2004). The main characteristic of these models is that they evaluate the fit of a theoretical model that represents the relations between a number of variables (Hair et al., 1998). The validation of the measurement model involves testing the difference between the observed variance-covariance matrix and the variance-covariance matrix expected under the proposed model (Hu and Bentler, 1999).

There are several goodness-of-fit statistics, the most common are the null hypothesis statistics, the absolute fit statistics and the incremental fit statistics (Smith and McMillan,

2001). The null hypothesis statistics are the chi-squared test ( $\chi^2$ ) and the Satorra-Bentler chi-squared test (S-B $\chi^2$ ), which corrects the chi-square under non-normality. Absolute fit statistics determine to what extent an a priori model fits the sample data. The most used are the goodness-of-fit index (GFI) and the root mean square error of approximation (RMSEA). Incremental fit statistics include a group of indices whose calculation relies on comparison with a baseline model and includes the comparative fit index (CFI) and the non-normed fit index (NNFI). Table 2 shows the most widely reported fit statistics and their recommended cut-off values (Bentler, 1995; Hu and Bentler, 1999).

The specified model showed an acceptable goodness-of-fit which allowed us to test the proposed hypotheses. The model was estimated by robust maximum likelihood (Bentler, 1995) which corrects the assumption of multivariate normal distribution (Bentler, 1995). The relation between the variables is estimated through regression coefficients which reflect the magnitude and the sign of the relations. Thus t-values and p-values for each relation revealed that malicious envy does not have a significant influence on word of mouth intention. However, benign envy and admiration positively influence word of mouth intention. Thus, as stated in the hypotheses, the greater the benign envy, the greater the word of mouth intention. This relation also occurs between admiration and word of mouth intention. Therefore, it is possible to support hypotheses H1, H2 and H3.

Table 2

Results of structural equation model (n=240)

After testing the effect of benign envy, admiration and malicious envy on word of mouth, we analysed whether cultural differences moderate the effect of those variables (H4) by means of a multi-sample analysis. Multi-sample analysis simultaneously estimates the proposed model in different groups and allows to test if the relation between variables is



different among groups. This analysis was estimated for the cultures under study, Spain and China, and the multi-sample solution showed acceptable goodness-of-fit indices (see Table 3).

Then, to check whether causal parameters significantly differed between groups, a multi-sample model was estimated by introducing as a null hypothesis the equality of the causal coefficient in both cultures. If this constraint implied a significant change in the chi-squared statistic, then H4 would be rejected and it would be possible to state that the causal parameter significantly differs between one culture and another. The chi square of the non-constrained model and chi square of the constrained model is compared for each parameter (Hox and Bechger, 1998; Mueller, 1999). Table 4 shows the results on the significance of the differences between the two chi-squares. As can be seen, there were no significant differences in the relationships under study between Spain and China.

Table 3

Multi-sample analysis: causal relations in China (n=120) and in Spain (n=120)

Table 4

Multi-sample analysis: variation of the Chi-squared

## **Discussion and implications**

## *Discussion*

Previous literature in the fields of marketing and economics has dealt with the consequences of upward social comparisons on consumption (e.g. Liu and Li, 2019). However, little is known about the effect of upward social comparisons on non-transactional behaviours, such as word of mouth. In the current research, an experimental design demonstrates how different types of reactions to upward social comparisons affect word of mouth intention. Following previous studies on feelings that arise from upward social comparisons, we distinguish between benign envy, admiration and malicious envy (Van de Ven et al., 2011b). By studying the effect of these feelings on word of mouth intention, our research complements the literature on the effect of upward social comparisons in different facets of consumption, such as product evaluation (Van de Ven et al., 2011a), consumption of services (Anaya et al., 2016), brand preference (Kao, 2019) or attitude towards social media influencers (Lee and Eastin, 2020).

Our findings show that, as occurs when observing the cognitive consequences of envy (Crusius and Lange, 2014), when non-transactional responses are analysed, it is relevant to take into account the different forms of envy. In fact, the rationale for our experiment was to provoke specific emotional reactions —benign envy, admiration, malicious envy— to test the way in which the motivations they activate influence word of mouth intention. Consistent with literature on how psychological processes shape social transmission (Berger and Milkman, 2012), the results show that benign envy, admiration and malicious envy play a different role in motivating word of mouth. By demonstrating that benign envy positively influences word of mouth intention, our findings corroborate the literature on envy and attitude towards the envied object (Sung and Phau, 2019).

Furthermore, these findings converge with evidence that social considerations may be important in information sharing (Baek et al., 2017). We extend these findings to show that the perceived position of the individual in relation to the content of the information that is shared affects information sharing.

The current research provides support for the association between benign envy and the process of admiration (Loureiro et al., 2020). We extend this finding to the domain of information sharing by showing that, as far as word of mouth intention is concerned, the effect of benign envy is similar to that derived from a feeling of admiration.

Our findings are largely consistent with models that propose that self-conscious emotions of negative nature, such as malicious envy, do not motivate information transmission (Rimé, 2009).

These results contribute to an emerging literature on how overexposure to the lives of others affect individuals (e.g., Lange et al., 2018; Lemay et al., 2019). Showing the effects on word of mouth intention of benign envy, admiration and malicious envy in two different cultural contexts illustrates their generalizability. In fact, the effects hold for both the Spanish and Chinese cultural markets. This finding is in line with recent research examining how culture affects the relationship between envy and behavioural strategies to reduce envy (Wenninger et al., 2019). It extends those studies by considering the management of information about the superior others as a strategy to cope with the effect of envy.

### *Theoretical implications*

This paper makes several contributions. First, it provides insight into the influence of emotions on non-transactional behaviours. In particular, we focus on emotional reactions

to upward social comparisons relatively ignored by empirical scholarship. We fill this gap showing that word of mouth intention is influenced by how people feel when they compare themselves with someone of their social environment. Prior literature highlights the relevant role of arousal as a driver of social transmission and relates this arousal with the emotional burden of the message transmitted (Berger, 2011; Berger and Milkman, 2012). This study points out that it is not only the content of the message but also the positional comparison with this content that determines the receivers' disposition to share that message.

Second, the work sheds light on the different effects of distinct types of reactions to upward social comparisons. Previous studies have emphasized how different types of envy affect envious reactions in different ways (Rentzsch and Gross, 2015). In accordance with previous research (Van de Ven et al., 2010), benign envy provokes a desire of emulation and malicious envy motivates destruction. This paper demonstrates that emulation goes hand in hand with a desire to be a spokesperson of others' good news. The logic behind this behaviour could be that contributing to spread others' fortune is a way of being part of what is envied. Furthermore, the influence of admiration on word of mouth intention follows the same direction as that of benign envy. Those effects reinforce the role of word of mouth as a channel for feeling part of something that is considered admirable. Under the same logic, malicious envy —followed by the desire of not emulating but destroying the envied— does not trigger word of mouth intention.

Third, the analysis of different reactions to upward social comparisons helps to explain one role of admiration that has not been reflected by prior research. Admiration has been categorized as a non-productive emotion as idolizing the other is not accompanied by a self-improvement motivation (Van de Ven et al., 2011b). Thus, under a strict analysis of the transactional consequences of admiration, there is not a behavioural response

associated with the fact of admiring someone. However, admiration positively influences word of mouth intention, highlighting its importance as a motivator of non-transactional behaviours. This paper shows a social function of admiration with indirect benefits on the self. In some way, echoing the virtues of the one admired provokes the feeling of being part of what is considered admirable.

Fourth, this study contributes to the research on envy by addressing the consistence of the findings about the behavioural tendencies spurred by this emotion in different cultural contexts. This research demonstrates that the positive effect of benign envy holds in different cultural contexts, at least in terms of its influence on word of mouth intention.

#### *Managerial implications*

These results offer several insights into how to manage word of mouth. When promoting brand message sharing through aspirational consumption based on ideal others, companies should take into account the effect on word of mouth of the possible reactions to upward social comparisons. There is a thin line between self-improvement—which can be followed by aspirational consumption to keep up with the admired other—and self-surrender—where wonderment of someone due to something that is considered unreachable does not trigger aspirational consumption. Upward social comparisons followed by admiration provoke word of mouth of the admirer about what is admired. This could be an explanation of why celebrity endorsement strategies push individual willingness to share brand messages supported by someone admired. Moreover, when benign envy follows an upward social comparison, that feeling leads the consumer to both imitate the other and share how good the other is at something. From this point of view, brand messages backed up by someone that can spur benign envy should be more

productive than those that rest on a figure susceptible to provoke admiration. That upward social comparison should be free of hostility. Otherwise, malicious envy appears, leading the consumer to neither keep up with the envied other nor promote word of mouth. For example, Apple has been sharing videos under the “Behind the Mac” campaign since August 2018. The first videos featured consumers, creators and professionals who were using their Mac to make their mark in the world. The goal was to show Apple’s desire to expand the potential of creativity for everyone. The stories of entrepreneurs, musicians or accessibility advocates can be a source of benign envy which could trigger direct transactions—that is, buying desire—and, according to the results of this study, indirect transactions in the shape of word of mouth. The latest ads of the campaign showcase accomplished individuals—such as Serena Williams, Anna Wintour or Shawn Mendes—behind the screens of their Apple computer. These stories could be a source of malicious envy or admiration, which, as this study shows, have completely different effects in terms of the spread of the information campaign through word of mouth.

Apart from encouraging brand message sharing, managers should also focus on incentivising consumers’ sharing of their own consumption experiences. This paper can be helpful in the design of those incentives by suggesting the relevance of taking into account the role of upward social comparisons. This can be done by encouraging the sharing of consumption experiences accompanied by underlying messages of the type “I wish you were here”, or “Someday this could be yours”. For instance, promotion strategies that allow consumers to show their consumption experiences while offering others the opportunity to enjoy them in the future are more likely to be shared. On the contrary, exposure to others’ desirable consumption experiences that provokes malicious envy does not encourage word of mouth. According to these results, experiential ads such as, for example, a Netflix campaign that lets people swap faces with their favourite TV

show characters, could have more possibilities of generating word of mouth if it included a “face-swap” app, able to involve more people than just the person that directly uses the app (for example, including pictures of other people or supposed excerpts of dialogues of the tv show that involved them).

In short, these insights on the effect of different types of reactions to upward social comparisons on word of mouth intention may guide companies in designing strategies to incentivize consumer-to-consumer sharing of experiences of consumption, so they may manage word of mouth in a more beneficial way.

#### *Limitations and future research directions*

These insights also suggest alternative routes that should be explored to clarify the effect of different types of reactions to upward social comparisons on word of mouth. We find an effect of benign envy but not of malicious envy. This difference deserves future research. For example, the possible influence of the type of communication should be considered. Our study analyses how benign envy that results from a face-to-face encounter can encourage word of mouth intention. The effect of different types of envy provoked by stimuli transmitted by online channels might be examined. This is especially relevant taking into account that unflattering social comparisons are very frequent on social media (Lemay et al., 2019).

This study considers the effect of reactions to upward social comparisons on the intention of sharing a situation of consumption. Future research should consider the effect of these reactions on the disposition to share negative information about the person envied.

Moreover, the results of the study are derived from one experiment. While its initial results look promising, further studies could test, for example, a different type of products.

In addition, our study chose university students as the sample, so the generalization of our results to the general population should be interpreted with caution. Future research could test our findings among other age groups. The decision rules proposed by this study could serve as a basis to investigate word of mouth on an aggregate level by an agent-based modelling approach. Future research could encode the micro-rules of word of mouth predicted by this study and measure emergent macro-level interactions (Rand and Rust, 2011).

Our study is embedded in the context of service consumption. An extension of our research could explore the effects of envy on shared social processes in non-consumption settings, for example, on leadership, teamwork or sports competitions.

## References

- Aleti, T., Pallant, J. I., Tuan, A., & van Laer, T. (2019). Tweeting with the stars: Automated text analysis of the effect of celebrity social media communications on consumer word of mouth. *Journal of Interactive Marketing*, 48, 17-32. <https://doi.org/10.1016/j.intmar.2019.03.003>
- Anaya, G. J., Miao, L., Mattila, A.S., & Almanza, B. (2016). Consumer envy during service encounters. *Journal of Services Marketing*, 30, 359-372. <https://doi.org/10.1108/JSM-03-2015-0121>
- Baek, E. C., Scholz, C., O'Donnell, M. B., & Falk, E. B. (2017). The value of sharing information: a neural account of information transmission. *Psychological Science*, 28, 7, 851-861. <https://doi.org/10.1177%2F0956797617695073>
- Bagozzi, R. P. (2006). The role of social and self-conscious emotions in the regulation of business-to-business relationships in salesperson-customer interactions. *Journal of*



*Business & Industrial Marketing*, 21, 453-457.

<https://doi.org/10.1108/08858620610708948>

Bentler, P.M. (1995). *EQS Structural Equations Program Manual, Multivariate Software Inc.* USA: Encino.

Berger, J. (2011). Arousal increases social transmission of information. *Psychological Science*, 22, 891-893. <https://doi.org/10.1177%2F0956797611413294>

Berger, J., & Milkman, K. L. (2012). What makes online content viral? *Journal of Marketing Research*, 49, 192-205. <https://doi.org/10.1509%2Fjmr.10.0353>

Berger, J., & Schwartz, E. M. (2011). What drives immediate and ongoing word of mouth? *Journal of Marketing Research*, 48, 869-880. <https://doi.org/10.1509%2Fjmkr.48.5.869>

Brachfeld, O. (2013). *Inferiority feelings: in the individual and the group.* United Kingdom: Routledge.

Bradley, M.M., & Lang P.J. (1994). Measuring emotion: the self-assessment manikin and the semantic differential. *Journal of Behavior Therapy and Experimental Psychiatry*, 25, 49-59. <https://doi.org/10.1509%2Fjmkr.48.5.869>

Cappella, J. N., Kim, H. S., & Albarracín, D. (2015). Selection and transmission processes for information in the emerging media environment: Psychological motives and message characteristics. *Media Psychology*, 18, 3, 396-424. <https://doi.org/10.1080/15213269.2014.941112>

Chen, Z. (2017). Social acceptance and word of mouth: How the motive to belong leads to divergent WOM with strangers and friends. *Journal of Consumer Research*, 44, 3, 613-632. <https://doi.org/10.1093/jcr/ucx055>

Cobo, M. J., López - Herrera, A. G., Herrera - Viedma, E., & Herrera, F. (2012). SciMAT: A new science mapping analysis software tool. *Journal of the American Society*

*for Information Science and Technology*, 63, 1609-1630.

<https://doi.org/10.1002/asi.22688>

Cobo, M.J., López-Herrera, A.G., Herrera-Viedma, E., & Herrera, F. (2011). An approach for detecting, quantifying, and visualizing the evolution of a research field: A practical application to the fuzzy sets theory field. *Journal of Informetrics*, 5, 146-166.

<https://doi.org/10.1016/j.joi.2010.10.002>

Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication and Society*, 4, 3, 245–264.

[https://doi.org/10.1207/S15327825MCS0403\\_01](https://doi.org/10.1207/S15327825MCS0403_01)

Cohen-Charash, Y., & Larson, E. C. (2017). An emotion divided: Studying envy is better than studying “benign” and “malicious” envy”. *Current Directions in Psychological Science*, 26, 174-183. <https://doi.org/10.1177%2F0963721416683667>

Crusius, J., & Lange, J. (2014). What catches the envious eye? Attentional biases within malicious and benign envy. *Journal of Experimental Social Psychology*, 55, 1-11.

<http://dx.doi.org/10.1016/j.jesp.2014.05.007>

Ditcher, E. (1966). How word-of-mouth advertising works. *Harvard Business Review*, 44, 147-66.

Dow, J. (1981). The image of limited production: Envy and the domestic mode of production in peasant society. *Human Organization*, 40, 360-363.

Dubois, D., Bonezzi, A., & De Angelis, M. (2016). Sharing with friends versus strangers: How interpersonal closeness influences word-of-mouth valence. *Journal of Marketing Research*, 53, 5, 712-727. <https://doi.org/10.1509%2Fjmr.13.0312>

Duffy, M. K., Shaw, J. D., & Schaubroeck, J. M. (2008). Envy in organizational life. *Envy: Theory and Research*, 167-189.

- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140. <https://doi.org/10.1177%2F001872675400700202>
- Foster, G. M., Apthorpe, R. J., Bernard, H. R., Bock, B., Brogger, J., Brown, J. K., ... & Freeman, S. T. (1972). The anatomy of envy: A study in symbolic behavior [and comments and reply]. *Current Anthropology*, 13, 165-202.
- Frank, R.H. (1999). *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*. New York: Free Press.
- Frijda, N. H., Ortony, A., Sonnemans, J., & Clore, G. L. (1992). The complexity of intensity: issues concerning the structure of emotion intensity in M. Clark (ed.), *Review of Personality and Social Psychology*, 13 (pp. 60-89). Newbury Park: Sage.
- Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making*, 26, 3, 213-224. <https://doi.org/10.1002/bdm.1753>
- Hair, J. F., Anderson, R. E., Tatham, R. L. & Black, W. C. (1998). *Multivariate Data Analysis*. USA: Prentice Hall.
- Hanel, P. H. P., & Vione, K. C. (2016) Do student samples provide an accurate estimate of the general public? *PLoS ONE*, 11, 12, e0168354. <https://doi.org/10.1371/journal.pone.0168354>
- Hareli, S., & Weiner, B. (2002). Dislike and envy as antecedents of pleasure at another's misfortune. *Motivation and Emotion*, 26, 257-277. <https://doi.org/10.1023/A:1022818803399>
- Hox, J. J., & Bechger, T. M. (1998). An introduction to structural equation modeling. *Family Science Review*, 11, 354-373.

- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1-55. <https://doi.org/10.1080/10705519909540118>
- Hu, H. H., Wang, L., Jiang, L., & Yang, W. (2019). Strong ties versus weak ties in word-of-mouth marketing. *BRQ Business Research Quarterly*, 22, 4, 245-256. <https://doi.org/10.1016/j.brq.2018.10.004>
- Jin, S. V., Muqaddam, A., & Ryu, E. (2019). Instafamous and social media influencer marketing. *Marketing Intelligence & Planning*, 37, 5, 567-579. <https://doi.org/10.1108/MIP-09-2018-0375>
- Jin, S. V., & Ryu, E. (2020). "I'll buy what she's# wearing": The roles of envy toward and parasocial interaction with influencers in Instagram celebrity-based brand endorsement and social commerce. *Journal of Retailing and Consumer Services*, 55, 102121. <https://doi.org/10.1016/j.jretconser.2020.102121>
- Kao, D. T. (2019). The impact of envy on brand preference: brand storytelling and psychological distance as moderators. *Journal of Product & Brand Management*, 28, 4, 515-528. <https://doi.org/10.1108/JPBM-08-2018-2004>
- Lange, J., Paulhus, D. L., & Crusius, J. (2018). Elucidating the dark side of envy: Distinctive links of benign and malicious envy with dark personalities. *Personality and Social Psychology Bulletin*, 44, 601-614. <https://doi.org/10.1177%2F0146167217746340>
- Lee, J. A., & Eastin, M. S. (2020). I like what she's# endorsing: The impact of female social media influencers' perceived sincerity, consumer envy, and product type. *Journal of Interactive Advertising*, 20(1), 76-91. <https://doi.org/10.1080/15252019.2020.1737849>
- Leibenstein, H. (1950). Bandwagon, snob, and Veblen effects in the theory of consumers' demand. *The Quarterly Journal of Economics*, 64, 183-207. <https://doi.org/10.2307/1882692>

- Lemay, D.J., Doleck, T., & Bazelais, P. (2019). Do instrumental goal pursuits mediate feelings of envy on Facebook and happiness or subjective well-being? *Computers in Human Behavior*, 91, 186-191. <https://doi.org/10.1016/j.chb.2018.09.043>
- Liu, H., Wu, L., & Li, X. (2019). Social media envy: how experience sharing on social networking sites drives millennials' aspirational tourism consumption. *Journal of Travel Research*, 58, 3, 355–69. <https://doi.org/10.1177/0047287518761615>
- Lockwood, P., & Kunda, Z. (1997). Superstars and me: predicting the impact of role models on the self. *Journal of Personality and Social Psychology*, 73, 1, 91-103. <https://psycnet.apa.org/doi/10.1037/0022-3514.73.1.91>
- Loureiro, S. M. C., de Plaza, M. A. P., & Taghian, M. (2020). The effect of benign and malicious envies on desire to buy luxury fashion items. *Journal of Retailing and Consumer Services*, 52, 1-14 (forthcoming). <https://doi.org/10.1016/j.jretconser.2018.10.005>
- Luminet, O., Bouts, P., Delie, F., Manstead, A.S., & Rimé, B. (2000). Social sharing of emotion following exposure to a negatively valenced situation. *Cognition Emotion*, 14, 661-688. <https://doi.org/10.1080/02699930050117666>
- McQuitty, S. (2004). Statistical power and structural equation models in business research. *Journal of Business Research*, 57, 175-183. [https://doi.org/10.1016/S0148-2963\(01\)00301-0](https://doi.org/10.1016/S0148-2963(01)00301-0)
- Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21, 986-1010. <https://doi.org/10.5465/amr.1996.9704071861>
- Mueller, R. O. (1999). *Basic Principles of Structural Equation Modeling: An Introduction to LISREL and EQS*. USA: Springer Science & Business Media.

- Parrott, W. G., & Smith, R. H. (1993). Distinguishing the experiences of envy and jealousy. *Journal of Personality and Social Psychology*, 64, 906-920. <https://psycnet.apa.org/doi/10.1037/0022-3514.64.6.906>
- Pennebaker, J.W. (1989). Confession, inhibition, and disease. *Advances in Experimental Social Psychology*, 22, 211-244.
- Peterson, R. A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research*, 28, 3, 450-461. <https://doi.org/10.1086/323732>
- Quintanilla, L., & de López, K. J. (2013). The niche of envy: Conceptualization, coping strategies, and the ontogenesis of envy in cultural psychology. *Culture & Psychology*, 19, 1, 76-94. <https://doi.org/10.1177%2F1354067X12464980>
- Rammstedt, B., Kemper, C. J., & Borg, I. (2013). Correcting Big Five personality measurements for acquiescence: An 18 - country cross - cultural study. *European Journal of Personality*, 27, 1, 71-81. <https://doi.org/10.1002/per.1894>
- Rand, W., & Rust, R. T. (2011). Agent-based modeling in marketing: Guidelines for rigor. *International Journal of Research in Marketing*, 28, 3, 181-193. <https://doi.org/10.1016/j.ijresmar.2011.04.002>
- Rentsch, K., & Gross, J.J. (2015). Who turns green with envy? Conceptual and empirical perspectives on dispositional envy. *European Journal of Personality*, 29, 530-547. <https://doi.org/10.1002/per.2012>
- Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, 1, 60-85. <https://doi.org/10.1177%2F1754073908097189>
- Salerno, A., Laran, J., & Janiszewski, C. (2019). The bad can be good: When benign and malicious envy motivate goal pursuit. *Journal of Consumer Research*, 46, 388-405. <https://doi.org/10.1093/jcr/ucy077>

- Saucier, G., Kenner, J., Iurino, K., Bou Malham, P., Chen, Z., Thalmayer, A. G., ... & Çankaya, B. (2015). Cross-cultural differences in a global “survey of world views”. *Journal of Cross-Cultural Psychology*, 46, 1, 53-70. <https://doi.org/10.1177%2F0022022114551791>
- Smith, T. D., & McMillan, B. F. (2001). A primer of model fit indices in structural equation modeling. *Paper presented at the Annual Meeting of the Southwest Educational Research Association*, New Orleans. Retrieved May 10th, 2020 from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/16/cc/b3.pd](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/16/cc/b3.pd)
- Smith, R.H. (2004). Envy and its transmutations in L.Z. Tiedens and C.W. Leach (eds.), *The social life of emotions* (pp. 43-63). Cambridge, England: Cambridge University Press.
- Smith, R.H., Parrott, W.G., Diener, E.F., Hoyle, R.H., & Kim, S.H. (1999). Dispositional envy. *Personality and Social Psychology Bulletin*, 25, 1007-1020. <https://doi.org/10.1177%2F01461672992511008>
- Steenkamp, J. B. E., & Baumgartner, H. (2000). On the use of structural equation models for marketing modeling. *International Journal of Research in Marketing*, 17, 195-202. [https://doi.org/10.1016/S0167-8116\(00\)00016-1](https://doi.org/10.1016/S0167-8116(00)00016-1)
- Stephen, A. T. (2016). The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology*, 10, 17-21. <https://doi.org/10.1016/j.copsyc.2015.10.016>
- Stieglitz, S., & Dang-Xuan, L. (2013). Emotions and information diffusion in social media—sentiment of microblogs and sharing behaviour. *Journal of Management Information Systems*, 29, 217-248. <https://doi.org/10.2753/MIS0742-1222290408>

- Sung, B., & Phau, I. (2019). When pride meets envy: Is social superiority portrayal in luxury advertising perceived as prestige or arrogance? *Psychology & Marketing*, 3, 2, 113-119. <https://doi.org/10.1002/mar.21162>
- Thomas, V. L., Fowler, K., & Saenger, C. (2020). Celebrity influence on word of mouth: the interplay of power states and power expectations. *Marketing Letters*, 31, 105-120. <https://doi.org/10.1007/s11002-020-09513-z>
- Tracy, J. L., & Robins, R. W. (2004). Putting the self into self-conscious emotions: a theoretical model. *Psychological Inquiry*, 15, 103-125. [https://doi.org/10.1207/s15327965pli1502\\_01](https://doi.org/10.1207/s15327965pli1502_01)
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: the experiences of benign and malicious envy. *Emotion*, 9, 419-429.
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2010). Warding off the evil eye when the fear of being envied increases prosocial behaviour. *Psychological Science*, 21, 1671-1677. <https://doi.org/10.1177/0956797610385352>
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2011a). The envy premium in product evaluation. *Journal of Consumer Research*, 37, 984-998. <https://doi.org/10.1086/657239>
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2011b). Why envy outperforms admiration. *Personality and Social Psychology Bulletin*, 37, 784-795. <https://doi.org/10.1177/0146167211400421>
- Wenninger, H., Cheung, C. M., & Krasnova, H. (2019). College-aged users behavioral strategies to reduce envy on social networking sites: A cross-cultural investigation. *Computers in Human Behavior*, 97, 10-23. <https://doi.org/10.1016/j.chb.2019.02.025>
- Wobker, I., & Kenning, P. (2013). Drivers and outcome of destructive envy behavior in an economic game setting. *Schmalenbach Business Review*, 65, 173-194.



Wojnicki, A.C., & Godes, D. (2008). *Word-of-mouth as self-enhancement, marketing research paper* [6-01]. Boston, MA: Harvard Business School. <https://dx.doi.org/10.2139/ssrn.908999>

Zeng, F., Chi, Y., Xiao, Z., & Dong, M. C. (2020). Understanding the spillover effects of channel reward on observers' commitment: The mediating role of envy. *Industrial Marketing Management*. In Press. <https://doi.org/10.1016/j.indmarman.2019.01.003>

Table 1  
Sample demographics

COUNTRY		GENDER				AGE			
Spain	China	Spain		China		Age	Total	Spain	China
120	120	Male	Female	Male	Female	19	32	15	17
		66	54	73	47	20	68	37	31
						21	49	25	24
						22	33	18	15
						23	27	11	16
						24	15	5	10
						25-28	16	9	7

Table 2

Results of structural equation model (n=240)

CAUSAL RELATIONS		Standardized coefficients (t-Student)
H1: Benign envy → word of mouth intention		0.166 (2.503)
H2: Admiration → word of mouth intention		0.236 (3.475)
H3: Malicious envy → word of mouth intention		0.098 (1.342)
Goodness-of-fit statistics	Value	Level of acceptance
Satorra-Bentler chi-squared (S-B $\chi^2$ )	3.5782 (p = 0.31076)	p > 0.05
Goodness-of-fit index (GFI)	0.993	≥ 0.90
Root mean square error of approximation (RMSEA)	0.028	≤ 0.05
Comparative fit index (CFI)	0.987	≥ 0.90
Non-normed fit index (NNFI)	0.929	≥ 0.90

Table 3

Multi-sample analysis: causal relations in China (n=120) and in Spain (n=120)

		<b>China</b>	<b>Spain</b>
		Standardized	Standardized
<b>CAUSAL RELATIONS</b>		coefficients	coefficients
		(t-Student)	(t-Student)
H1: Benign envy → word of mouth intention		0.218 (2.331)	0.091 (0.978)
H2: Admiration → word of mouth intention		0.150 (1.602)	0.325 (3.490)
H3: Malicious envy → word of mouth intention		0.004 (0.042)	0.177 (2.126)
<b>Goodness-of-fit statistics</b>	<b>Value</b>	<b>Level of acceptance</b>	
Satorra-Bentler chi-squared (S-B $\chi^2$ )	6.951 (p = 0.32539)	p > 0.05	
Goodness-of-fit index (GFI)	0.986	≥ 0.90	
Root mean square error of approximation (RMSEA)	0.026	≤ 0.05	
Comparative fit index (CFI)	0.987	≥ 0.90	
Non-normed fit index (NNFI)	0.973	≥ 0.90	

Table 4

Multi-sample analysis: variation of the Chi-squared

---

<b>Causal relations</b>	<b>df</b>	<b>Differences <math>\chi^2</math> between China and Spain</b>	<b>Probability</b>
H1: Benign envy → word of mouth intention	1	0.955	0.328
H2: Admiration → word of mouth intention	1	1.604	0.205
H3: Malicious envy → word of mouth intention	1	1.846	0.174

---

## Figure legends

Figure 1 Salient themes in envy research before 2014

Figure 2 Salient themes in envy research after 2015

Figure 3 Research model