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### **Independent or Interdependent? Examining the Self-construal Theory in the Processing of Online Travel Reviews**

The social media context is evoking the considerable changes in consumers' self-construal in the new individualized postmodern era. Is generally classifying Chinese consumers as interdependent self still applicable? Is the self-construal held by Chinese consumers changing? If so, how do the changes predict the role of self-construal in their processing of online travel reviews (OTRs)? By combining the self-construal theory into the information adoption model, this study explored the dynamics of the two different self-construals, independent and interdependent, in consumers' processing of OTRs. Findings from a data set of 302 college students indicated that, although the young generation tends to be independent in a collectivistic culture context such as China, they still prefer to utilize their interdependent self to make decisions when processing OTRs. Especially, independent consumers are inclined to assess the usefulness of OTRs through the argument quality. Theoretical and practical implications are also provided.

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Keywords: self-construal, interdependent self, independent self, online travel reviews (OTRs)

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## **Introduction**

The general principles to classify consumers based on the individualism-collectivism dimensions (Hofstede, 1980) are encountering enormous challenges. Notably, the social media environment is attracting consumers as well as brands to shift their eyes to individual level differences. It means that the concept of self-construal relying on the cultural level differences (e.g., collectivist Chinese vs. individualist American) needs to be questioned. On the other hand, the two aspects of self-construal, independent and interdependent, have been found as essential in predicting usage intensity of social media platforms (Chu, Windels, & Kamal, 2015). Despite these, the impact of the two self-construals in processing online travel reviews (OTRs) are mostly scarce in the literature, leaving much space for academics to explore the individual level differences in OTRs adoption. Is generally classifying Chinese consumers as interdependent self still applicable? Is the self-construal held by Chinese consumers changing? If so, how do the changes predict the role of self-construal in their processing of OTRs? By expanding the self-construal theory into information adoption, this study explores the different roles of the two distinct self-construals in motivating the processing of OTRs. It contributes an essential perspective to the existing literature on the consumer engagement with online travel reviews.

## **Literature Review and Hypotheses Development**

### *Self-construal theory*

Self-construal theory: The self-construal theory proposed by Markus and Kitayama (1991) derives from the individualist-collectivist scale developed by Hofstede (1980). However, differing from the latter, which focuses on the cultural level differences, the self-construal theory tries to explain in-depth the individual level differences (Plume, Dwivedi, & Slade, 2017). It measures such differences in two different facets of the self: independent and

interdependent (Markus & Kitayama, 1991). The two forms of self-construal depict that “an individual interacts with others and views the self as an independent identity or in relation to others” (Wang, Ma, & Li, 2015, p578). As such, the differing self-construals distinguish individuals’ variety in cognition, motivation, and behavior (Plume et al., 2017).

Independent and interdependent self: Both independent and interdependent self-construal coexist within an individual, while one aspect will be salient as the dominant trait embedded in “the self” (Das & Roy, 2019). Individuals high in independent self-construal (I-SC) characterize as an individualist, separate, and self-contained, focusing on their distinction with others and seeking for individual goals when using information (Singelis, 1994). In contrast, individuals high in interdependent self-construal (R-SC) are labeled as more collective, connected, and sociocentric, which means that they tend to appeal for a great need of belonging and social relationships when processing information (Markus & Kitayama, 1991).

Effects of self-construal: Previous studies expanded the concept of self-construal into research on consumer behavior and psychology. The effects of self-construal have been confirmed in user participation (community usage and participation) (Wang et al., 2015), continuous intention of online brand community (Hu, Zhang, & Luo, 2016), mobile technique acceptance (Choi & Totten, 2012), and so on. Despite these, as Plume et al. (2017) argued, it is challenging to combine self-construal’s concept into a comprehensive theory because of the minimal knowledge. Aiming at contributing more understanding of the differing roles of the two self-construals in consumer behavior of OTRs processing, this study will merge the self-construal theory into the information adoption model.

### *Processing online travel reviews*

The processing of online travel reviews (OTRs) is persuasive communication, in which an active subject attempts to change recipients' beliefs or actions by persuasive messages (Chang, Yu, & Lu, 2015). As such, the processing of OTRs can be well constructed through attitude-behavior theories. As one of the most feasible attitude-behavior theories, the information adoption model (IAM) (Sussman & Siegal, 2003) leads to the scope of information processing into online information adoption and has been widely verified in the eWOM studies (Erkan & Evans, 2018). It posits that a recipient's attitude can be changed by the persuasive messages through two routes. Recipients tend to evaluate the information usefulness through the essence of argument quality in a central route, and/or the essence of source cues such as source credibility in a peripheral route. Further, the information usefulness is considered as the most effective utilitarian reason which motivates recipients to adopt online information. Accordingly, the processing of OTRs can be illustrated by the IAM theory. Thus the casual relationships in the IAM construct *the primary three hypotheses* in this study (seek more information about H1-H3 in Figure 1).

The processing of OTRs has been documented in quite great detail, exploring the motivation, cognition, and behavior of different consumers in different situations or contexts (e.g., Tseng & Wang, 2016), yet there has been little focus on different aspects of the self, which leads the research on OTRs to a gap within the influence of self-concept.

### *Self-construal and information adoption*

Self-construal is an essential factor which directly explains an individual's behavior (Wang et al., 2015). With a large number of resources, the OTR websites provide various opportunities for users with high I-SC to seek uniqueness and express what they think, which satisfies their need to decide by themselves, and in turn, adapt to their independent-orientated

goals. On the other hand, the OTR websites also support the need of users with high R-SC in building connections and relationships with others, in particular, the trust helping them to make decisions. As Wang et al. (2015) noted that, users would benefit from all the opportunities and functions provided by the online community because they will shape users' favorable attitudes toward the community, thereby increasing their intention of participation. Hu et al. (2016) further found that in a video sharing community in China, both self-construals of users are positively associated with community usage and community participation. Given that the role of users' self-construals in the processing of OTRs has never been explored in an empirical study, replicating the findings in prior research on the online community, this study posits that:

H4 Independent self-construal has a positive impact on users' intention to adopt OTRs.

H5 Interdependent self-construal has a positive impact on users' intention to adopt OTRs.

Comparing to the individuals high in I-SC, individuals high in R-SC may display a more noticeable attitude and behavioral changes, because the trait of interdependent self is more pliable to the context users encounter, thereby being more influenced by it (Plume et al., 2017). Moreover, the essence of social media context in socialization naturally relies on the need for belonging and social connection embedded in users' interdependent self. Consistent with this line, Sia et al. (2009) indicated that individuals with high R-SC are more likely to be persuaded by reviews posted by fellow users than the impersonal organizational testimonials. Similarly, in a recent study on online engagement of a movie recommendation website (Moses et al., 2018), users high in R-SC were found to perform more interest in seeing

others' lists, thereby generating more interest in engagement intention. Therefore, this study assumes the following hypothesis:

H6 The effect of interdependent self-construal on adoption intention for OTRs is more effective than the effect of independent self-construal be.

#### *Self-construal and two routes of OTRs processing*

An OTR website, as a specific context of social media with user-generated content, consists of a variety of social media features in socialization, interaction, and personalization. In this environment, users can utilize OTRs and travel brands as an extension of themselves. That means users are inclined to engage with the information process that can be a way of reflecting themselves (Belk, 2013). Accordingly, this study postulates that users with differing self-construals tend to process the OTRs differently.

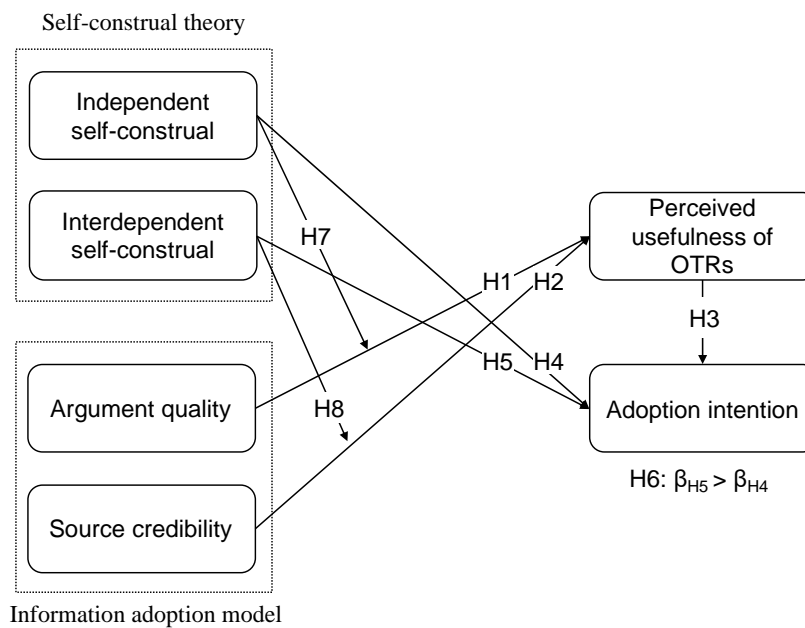
Previous studies have explored the different effects driven by the two aspects of the self on messages and consumer behavior from the motivation and cognition perspectives. In terms of information consumption, users high in I-SC are more likely to be motivated by utilitarian satisfaction, such as seeking for information fit to their identity, while users high in R-SC prefer to gain relations to a group through hedonic motivations (Holbrook & Hirschman, 1982). Na et al. (2014) found that individuals with more independent self have a more egocentric network connected via weak ties between others, while individuals with more interdependent self have a more tight-knit network supporting strong ties. Transforming such preferences to the processing of OTRs, the central route predicted by argument quality tends to occur in the users who make more effortful processing to assess the information quality and argument strength. It, therefore, reveals that they choose by following their principles (Chang, 2015). However, users traveling the peripheral route mainly determined by source credibility tend to make less effortful processing and evaluate information through a

simple cue, such as the expertise and experience of the information providers. These simple cues would guide users' behavior by their feelings on others and the fitting in with others (Singelis, 1994). Therefore, this study assumes that:

H7 The positive effect of argument quality on perceived usefulness of OTRs is stronger for users high in I-SC than users high in R-SC.

H8 The positive effect of source credibility on perceived usefulness of OTRs is stronger for users high in R-SC than users high in I-SC.

Under discussion previously, a conceptual model drawing upon the role of self-construal in processing OTRs is constructed in Figure 1.



**Figure 1. Conceptual model**

## Methodology

### Measurement



The variables, argument quality, source credibility, perceived information usefulness, and adoption intention, were measured by modifying and developing the instruments in the initial empirical study on the IAM (Sussman & Siegal, 2003) and several studies on information processing in social media context (Tseng & Wang, 2016; J. Zhang, Ito, Wu, & Li, 2017; K. Z. K. Zhang, Zhao, Cheung, & Lee, 2014). Four peer dimensions illustrating the ways of being independent or interdependent were utilized to measure self-construal (Hu et al., 2016; Vivian et al., 2016; Wang et al., 2015). They are difference vs. similarity (“On this website, I like being different from other users.” “On this website, being different from other users makes me feel uncomfortable.”), self-expression vs. harmony (“On this website, I prefer to say what I am thinking, even if it may disturb the harmony with other users.” “On this website, I try to adapt to other users, even if it means hiding my inner feelings.”), self-reliance vs. dependence on others (“On this website, I prefer to rely completely on myself rather than depend on other users.” “On this website, I prefer to ask other users for help rather than rely on myself.”), and self-direction vs. receptiveness to influence (“On this website, I prefer to do what I want without letting my family or friends influence me.” “On this website, I prefer to ask my family or friends for advice before making a decision.”). These four peer dimensions draw on self-construal at both of the individual and cultural levels, also shorten the 24-item self-construal scale built by Singelis (1994). It is therefore considered as appropriate to conduct an empirical study. As such, each facet of self-construal was measured by four items on a seven-point Likert scale.

#### *Data Collection, Sampling and Analysis*

A web-based survey targeting college students was conducted in Mainland China. Out of a total of 327 respondents, 302 valid samples were retained for further data analysis after screening out the outliers and illogical samples. Data analysis was rigorously continued along

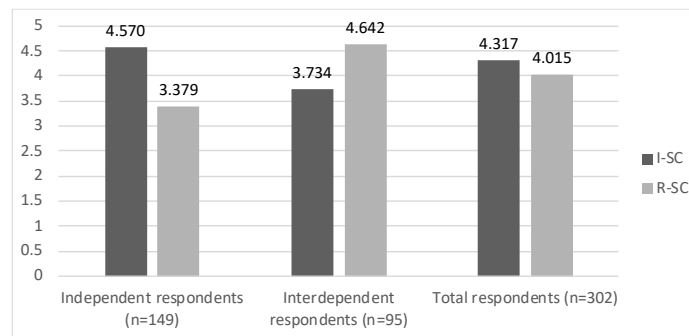
with the procedures of structural equation modeling (SEM): descriptive statistics, confirmatory factor analysis, main effects testing, and moderating effects testing. To examine the biased effects of self-construal, this study calculated the self-construal as a bipolar concept (Chang, 2015). The scales of the two self-construals reported by each respondent were compared to classify the respondents into two distinct groups, individuals with high I-SC ( $n = 149$ ,  $M_{I-SC} = 4.570$ ,  $M_{R-SC} = 3.379$ ), individuals with high R-SC ( $n = 95$ ,  $M_{R-SC} = 4.642$ ,  $M_{I-SC} = 3.734$ ), and one group with balance at the two self-construals ( $n = 58$ ,  $M_{I-SC} = M_{R-SC} = 4.621$ ). Emphasizing on the opposite traits simultaneously emerge in an individual, a multigroup difference analysis (high I-SC vs. high R-SC) after the structural model testing was implemented to examine the dynamics of the effects of the two self-construals on individuals' perception of OTRs.

## **Findings**

### *Descriptive statistics*

Considering that the two facets of self-construal coexist in an individual, this study tried to compare the mean scales to identify the different preferences of each facet embedded in the total population of respondents as well as in a single respondent. As shown in Figure 2, results revealed that at the angle of total respondents, I-SC ( $M = 4.317$ ,  $SE = 0.054$ ) showed higher than R-SC ( $M = 4.015$ ,  $SE = 0.065$ ) with significant difference ( $t(602) = 3.565$ ,  $p < .001$ ). At the angle of a respondent, the R-SC of interdependent respondents ( $n = 95$ ,  $M_{R-SC} = 4.642$ ) was found more excellent than the I-SC of independent respondents ( $n = 149$ ,  $M_{I-SC} = 4.570$ ). Since the targeted objects are college students in Mainland China, these findings are initially consistent with the highlight what the self-construal theory focuses on: the differences between individuals are becoming more important than the differences between

cultural backgrounds. Also, it can direct a tendency that the young Chinese generation will be performing more independent self.



**Figure 2. Independent and interdependent self-construal scales in different groups**

### Main effects

Results of the SEM verified that except for H4, all the main effects in the conceptual model were positively significant (Table 1). To discuss more detail, users can be persuaded by the usefulness of OTRs through their assessment of argument quality and source credibility embedded in the OTRs, which will motivate their intention to adopt OTRs (H1-H3). Therefore, this study further enhanced the applicability of the IAM in drawing upon the processing of OTRs.

**Table 1. Results of structural equation model**

Hypothesis	Path	Estimate	<i>t</i>	Test result
H1	AQ → PU	.389***	3.386	Supported
H2	SC → PU	.335**	2.894	Supported
H3	PU → AI	.763***	11.419	Supported
H4	I-SC → AI	.039 <sub>ns</sub>	.786	Unsupported
H5	R-SC → AI	.178***	3.509	Supported
H6	$\beta$ (R-SC → AI) > $\beta$ (I-SC → AI)		$\beta$ (H5) > $\beta$ (H4)	Supported
<i>R</i> <sup>2</sup>				
	Perceived information usefulness		0.480 (48.0%)	
	Travel information adoption		0.672 (67.2%)	

*Note.* AQ = Argument quality; SC = Source credibility; PU = Perceived usefulness; AI = Adoption intention; R-SC = Interdependent self-construal; I-SC = Independent self-construal.

<sup>ns</sup>This is not significant.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The higher interdependent self-construal contributed to a greater intention to adopt OTRs (H5), whereas the positive impact of independent self-construal on adoption intention was not significant (H4). Such results further provided a piece of strong evidence that R-SC is more effective and essential than I-SC for users to adopt OTRs (H6). As discussed previously, the total respondents held a more independent self, which embodied that users keep more individualistic thoughts in the new individualized postmodern era (Plume et al., 2017). Despite that, it is worth noting that when processing OTRs, the interdependent self rather than the independent self plays a more prominent role. This finding may help to make an image that although the young generation tends to regard themselves as independent and individualist in a collectivistic culture context such as China, they may still prefer to utilize their interdependent and collective self to make decisions when processing OTRs. Accordingly, why H4 in this study was rejected can be explained quite reasonably.

### *Moderating effects*

Based on the co-existence principle in the self-construal theory, results of the multigroup difference testing showed that although the Chi-square difference test was not significant, argument quality of OTRs was preferable to meet the need of respondents high in I-SC (H7). However, contrary to the expectation, the source credibility of OTRs also helped respondents high in I-SC evaluate the usefulness of OTRs. However, it did not evoke respondents high in R-SC significantly to perceive more usefulness of OTRs (H8). Two reasons may be able to understand these findings. Firstly, though that the OTR websites are viewed as consumer-generated media, processing the OTRs is still a planned behavior, and to seek useful and helpful OTRs is the most important goal (Markus & Kitayama, 1991).

Nevertheless, interdependent users rank social groups, goals, and relationships in priority. Hence, the processing of OTRs cannot satisfy their need for social motivation. Secondly, with observing the path coefficients between source credibility and the usefulness of OTRs in the two distinct groups, it is founded that they were considerably positive yet not significant. The sample size of interdependent respondents was less than 100, which did not reach the recommended size in statistics analysis: more than 150 or 200. Since this study is still in process, and the results will late break, future research is much more necessary. Table 2 shows the initial results of multigroup difference testing.

**Table 2. Differences between groups of users high in R-SC and users high in I-SC**

Path	Users high in R-SC (n = 95)	Users high in I-SC (n = 149)	$\Delta\chi^2$	$\Delta df$	<i>p</i>	Test result
AQ → PU	.536 <sub>ns</sub>	.418 <sup>***</sup>	0.060	1	0.806	H7: Partially Supported
SC → PU	.599 <sub>ns</sub>	.464 <sup>**</sup>	0.031	1	0.861	H8: Unsupported

*Note.* AQ = Argument quality; SC = Source credibility; PU = Perceived usefulness; R-SC = Interdependent self-construal; I-SC = Independent self-construal.

<sub>ns</sub>This is not significant.

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

## Conclusion

By combining the self-construal theory into the information adoption model, this study examined the dynamics of the two different self-construals, independent and interdependent, in the processing of OTRs from a consumer-oriented perspective. Findings shed light on two propositions: 1) argument quality is more helpful for independent consumers to assess the usefulness of OTRs, and 2) differences of the two self-construals at the individual level are as important as those differences at the cultural level. It appears that China's young generation tend to be individualist and independent, yet try to use their interdependent self derived from a cultural context of collectivism to make decisions about OTRs adoption.

Accordingly, this study contributed a vital exploration in expending the self-construal theory into the research domain of online travel reviews. It enriched the theoretical literature of the concept of self-construal by establishing a combined conceptual framework to examine the potential variations of the differing self-construals in processing OTRs. It also distinguished the independent traits of consumers from a collectivism society, which provides a clear and specific solution for academics to interpret the processing of online information from both levels at the individual and the culture.

In practice, this study suggested that the differing self-construals embedded in individuals can be utilized as a guide for travel brands to maximize consumer engagement and make innovations in their social media marketing strategies. Identifying the persuasive communication of OTRs at the level of individual differences such as self-construal is suggested to best align with the different needs and selves of consumers, which thereby makes consumers' information processing more friendly and personalized. In line with this, future research is recommended to extend the findings in this study and take more insights in more factors influencing the dynamics of self-construal, such as age and region.

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