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Movie Selection and E-WOM Preference: A Cross-Cultural Perspective

LEYLA DOGRUEL¹

Freie Universität Berlin, Germany

HAO XIAOMING

Nanyang Technological University, Singapore

This article investigates the quantity- and quality-motivated bandwagon effects on individual movie selection from a cross-cultural perspective. Based on theories of information processing and decision making, we examined how people from different cultural backgrounds (e.g., collective versus individual and vertical versus horizontal cultural orientations) differ in their preferences of aggregate electronic word-of-mouth (e-WOM), which is related to heuristic information processing, or more detailed individual e-WOM, which is related to systematic information processing. Empirically, we relied on an online study using movie selection scenarios that were distributed to participants in Singapore, the United States, and Germany. Results indicate significant cultural differences in the preference for e-WOM and related information processing modes. The individual cultural orientations of the participants offered a better explanation of the variance than a simple country-of-origin differentiation.

Keywords: individual cultural orientation, e-WOM, decision-making, information processing

From a media economic standpoint, media products such as books, movies, and music are characterized by uncertain product quality. For this reason, media consumers tend to rely on the experiences of predecessors and the use of collaborative feedback as an informational source when deciding what media content to use (Metzger, Flanagin, & Medders, 2010; Sundar, 2008). These types of user-generated and aggregated feedback and recommendations online are analyzed as *electronic word-of-mouth* (e-WOM), which has been found to be a crucial factor when selecting media and service-related products in digital environments (Berger, 2014; Sun, Youn, Wu, & Kuntaraporn, 2006). An individual's reliance on other users' product choices and evaluations has been shown to be related to bandwagon effects, or herd behavior, which describe the tendency of an individual to follow the behavior of previous

Leyla Dogruel: leyla.dogruel@fu-berlin.de

Hao Xiaoming: TXMHAO@ntu.edu.sg

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users (Bikhchandani, Hirshleifer, & Welch, 1998; Simon, 1954). Bandwagon effects can be triggered by two types of e-WOM information: aggregated ratings (e.g., view counts and star ratings) and individual user reviews (reviews and comments) (Qiu, Pang, & Lim, 2012). Based on the dual process theory of information processing, these types of information are associated with two processing approaches: heuristic and systematic (Xu, Hao, & Younbo, 2015).

Ample research has addressed the relevance and evaluation of the types of collaboration among Internet users and how these cues are related to distinct methods of information processing (Metzger et al., 2010). However, less attention has been given to the manner by which the different styles of decision making and information processing affect the reliance on popularity cues when selecting media products online. One significant parameter in decision-making research applies to the differences in information processing and decision making across cultures (Briley, Wyer, & Li, 2014; Choi, Choi, & Norenzayan, 2004). A more context-sensitive approach of cognitive processing can be observed among collectivistic and interdependent (Asian) cultures; individuals from individualistic, independent (Western) cultures exhibit object-focused cognitive attention (e.g., Nisbett & Miyamoto, 2005). These differences translate into a more analytic manner of reasoning for Westerners and a more holistic and contextualized manner of reasoning for Asians (Buchtel & Norenzayan, 2008, 2009). Although these distinct manners of reasoning have been examined from a broad perspective in decision-making research, the question of how cultural differences affect the selection and evaluation of media content in an online environment remains. Particular importance has been assigned to the global accessibility of digital media products and services and the need to broaden existing research from its focus on Western countries that has ignored possible cross-cultural differences (e.g., Arnett, 2008; Henrich, Heine, & Norenzayan, 2010).

Given this background, we aim to determine the extent to which cultural orientation explains either quantity-motivated (aggregate e-WOM) or quality-motivated (individual e-WOM) bandwagon cues on the selection of media products.

Conceptually, this study builds on theories of information processing from the combination of cognitive (dual process theory) and economic (information cascade and bandwagon effect) perspectives and on cross-cultural approaches to understand the decision-making processes of consumers in movie selection. Empirically, we opt to address our research question by focusing on movie selection in an online setting.

Information Processing and Popularity Cues

Information Cascade and Bandwagon Effects

The tendency of an individual to rely on the behaviors and experiences of other consumers in making decisions is subject to economic, psychological, and cognitive factors. From an economic perspective, the theory of information cascade describes how individuals follow the behavior of their predecessors (Bikhchandani et al., 1998). Individuals draw inferences from the actions of their predecessors and rely on visible information from them when they have limited or no information about how to evaluate a set of alternatives (de Vany & Lee, 2001). In this process, individuals first observe the

choices of previous users and then use such information as cues for making their own choices, resulting in favoritism toward products that are already popular. This mechanism of information cascade is crucial in online decision-making contexts because the online environment is shaped heavily by search engines and recommendation systems that provide advantages to popular product alternatives (Easley & Kleinberg, 2010). As a result, a bandwagon effect can occur, providing popular products a “big-gets-bigger” advantage (Fu & Sim, 2011).

The reliance on the experience of previous consumers is relevant especially for products and services that can be characterized as experience goods (Hey & McKenna, 1981; Nelson, 1970), such as books, music, paintings, restaurants, and travel destinations. Unlike with inspection goods (e.g., buying a car or laptop), the quality of experience goods can be difficult to evaluate before consumption, resulting in high levels of uncertainty. Therefore, imitating previous consumer behavior appears to be a reasonable strategy for selecting experience goods. A large body of research has found evidence on information cascades and subsequent bandwagon effects with respect to various objects, such as consumer goods, cultural products, and online information (for an overview, see Xu & Fu, 2014).

For this study, we opted to focus on movie selection as one archetypical example to study the preference for various types of e-WOM. Movies are globally appealing experience goods that are particularly prone to bandwagon effects (de Vany & Lee, 2001). Related studies have already demonstrated the positive effect of the frequency of e-WOM on a movie’s success (Duan, Gu, & Whinston, 2008; Kim, Park, & Park, 2013). For instance, a simulation study by de Vany and Lee (2001) demonstrated the relevance of information cascades in the case of movie success. The authors postulated that moviegoers observe both box office revenues and the WOM of previous moviegoers in making their choices. A more recent study by Xu and Fu (2014) found evidence of an aggregate bandwagon effect by analyzing real market data on Hollywood movie viewership in foreign countries. Fu and Sim (2011) focused on user-generated online videos and confirmed the bandwagon effect by demonstrating that videos with larger view counts continue to attract more viewers.

The theory of information cascades refers mainly to the analysis of conforming behaviors on an aggregate level; the bandwagon effect is employed to explain the tendency of consumers to rely on the feedback of other consumers on an individual level (Simon, 1954). From a heuristic perspective, the bandwagon heuristic (also known as majority vote or popularity heuristic) describes a simple mechanism that follows the logic of “if others think it’s good, then it should be good,” which triggers mental shortcuts in decision making (Chaiken, Liberman, & Eagly, 1989; Sundar, 2008).

Dual Process Theories of Information Processing

The use of mental shortcuts to make a decision about product alternatives or to evaluate information follows the logic of bounded rationality of individuals (Simon, 1954), which assumes that restrictions in cognitive capacities, limited information availability, and finite time budgets make it rational for individuals to rely on cue-based information processing instead of extensive decision-making strategies (Marewski, Galesic, & Gigerenzer, 2009). Dual process theories, such as the heuristic systematic model (HSM) (Chaiken et al., 1989; Chen & Chaiken, 1999) and the fast and frugal approach by Gigerenzer

(2008) describe these two types of information processing by distinguishing between the heuristic and systematic processing mechanisms. Following this notion, people are assumed to process information either in a heuristic (peripheral) or systematic (central) mode when making decisions or evaluating information. The use of the bandwagon heuristic as a mental shortcut to assess product quality is triggered by specific cues such as aggregate user information (popularity metrics) that can be processed with reduced effort (Sundar, 2008) and that allow media users to cope with information overload in online environments (Metzger et al., 2010). Existing research has demonstrated that media users rely on cue-based information processing to select and evaluate products and information online (Bellur & Sundar, 2014; Sundar, Knobloch-Westerwick, & Hastall, 2007).

When considering the use of e-WOM for the selection and evaluation of experience goods, two types of user-generated information can be distinguished: aggregated user evaluations (ratings) and written user recommendations (reviews) (Qiu et al., 2012). Relying on either aggregate or individual user information may each lead to a specific type of bandwagon effect: a quantity-motivated effect, in which people tend to rely on the aggregate of other users' evaluations, or a quality-motivated effect, in which people rely on more detailed written statements. Following the HSM, the two types of user feedback can thus be assumed to work through different cognitive mechanisms, with aggregated ratings acting as simple-to-process cues that trigger the heuristic process and with user reviews requiring more elaborate systematic processing (Fu, 2012). This assumption finds support in the different presentations of these types of information. Typically, aggregated information is presented with a numeric representation (e.g., a rank in movie charts or number of downloads) or pictorial depictions (e.g., star icons indicating aggregated user evaluations). The use of the picture superiority effect can be noted for the latter. As Fu (2012) argues with reference to Paivio and Begg (1974), imagery processing dominates textual information processing because pictures are easier to process in a broad visual sweep, whereas textual information demands higher cognitive effort to process because it requires a serial item-by-item inspection.

Previous studies have pointed out that an interplay of both modes of information processing is possible (Bohner, Moskowitz, & Chaiken, 1995; Reimer, Mata, Katsikopoulos, & Opwis, 2005). Using the example of the expertise heuristic (in which experts are usually considered correct), Reimer et al. (2005) demonstrated that when individuals encounter either an easy-to-process cue such as the communicator being a professor (heuristic processing) or an argument requiring more cognitively demanding evaluation of its quality in a given discussion (systematic processing t), they may rely on the expertise heuristic. For our empirical study of movie selection, we assume that a bandwagon effect following the heuristic underlined by the notion that relying on the behavior of predecessors is good can be triggered when an individual relies on either aggregate e-WOM (user ratings, heuristic processing) or individual product recommendations (user reviews, systematic processing) for information.

Cross-Cultural Differences in Information Processing and Decision Making

Studies addressing cultural effects on judgment and decision making (JDM) are based on the idea that different value systems in different societies determine different attitudes and styles of decision making (Yi & Park, 2003). Studies conducted to address these cross-cultural differences have found proof

of cultural effects on individual decision-making styles, information gathering and processing, and risk preferences (Briley et al., 2014; Guess, 2004; Leng & Botelho, 2010).

Studies on the use and processing of information in decision making underline the existence of different systems of thought in Asian and Western cultures (Nisbett & Miyamoto, 2005; Nisbett, Peng, Choi, & Norenzayan, 2001). Nisbett and Masuda (2011) proposed that people tend to exhibit a more holistic and contextual perception and evaluation of situations in interdependent Asian societies, whereas Westerners are more focused on particular objects in isolation from social context because of their individualistic and independent culture. With respect to cognitive processing and reasoning, Nisbett et al. (2001) argued that East Asians, with their holistic conception, tend to consider the entire field and rely on dialectic reasoning, whereas Westerners apply a more analytic approach, focusing on the object itself.

The distinction between analytic and holistic processing and their uneven use across cultures is also related to dual process theories (Buchtel & Norenzayan, 2009; Norenzayan, Smith, Kim, & Nisbett, 2002). Buchtel and Norenzayan (2009) argue that these two modes of thinking are comparable to the system 1 and system 2 differentiation. Whereas the holistic, dialectic method of reasoning is associated with system 1 (heuristic processing), the formal, rule-based reasoning method is related to systematic processing (system 2). Through a series of experiments comparing the reasoning of European Americans, Asian Americans, and East Asians under conditions where cognitive conflict between the formal and intuitive strategies of thinking was activated, Buchtel and Norenzayan (2009) found support for the assumption that European Americans are more likely to ignore intuition and follow learned rules than the East Asians (Norenzayan et al., 2002). However, by comparing system 1 and 2 approaches with analytic and holistic modes of decision making in cross-cultural comparisons, Buchtel and Norenzayan (2008, 2009) highlighted that even though both concepts share fundamental similarities, differences remain in specific presumptions. For instance, holistic thinking encourages individuals to focus on context and relationships, which does not necessarily occur intuitively and unconsciously. As a result, the clear distinction between effortful (system 2, deliberative) thinking and effortless (system 1, intuitive) thinking as proposed by the dual process approach cannot be translated to the analytic and holistic modes of thinking found in cross-cultural research on JDM.

Another relevant issue is raised from a methodological standpoint when studying cross-cultural differences. With respect to measuring cultural influences, researchers often use nationality as a proxy variable to make cultural distinctions and refer to Hofstede's (2001) cross-national study to characterize the nations they sample (Soares, Farhangmehr, & Shoham, 2007; Tsui, Nifadkar, & Ou, 2007). However, this approach (at least implicitly) assumes that culture is a static factor that can be described by stable differences in values along a fixed set of dimensions (Briley et al., 2014). As a result, studies that rely on nation as a proxy for cultural orientation do not take into account possible within-nation variations (Tsui et al., 2007). Briley et al. (2014) argued that a more dynamic view of culture should be considered to account for both the contextual and situational dependent effects of cultural orientation. In particular, migration, multiculturalism, and generational differences because of influences from globalization (and Westernization) need to be considered because they affect the cultural orientations of individuals and diminish the salience of cultural differences, as might be the case for a specific group of (young) college students (Berry, 2001; Hills & Atkins, 2013; Levitt & Jaworsky, 2007). Still, remembering that converging

technologies and global commerce do not appear to cause a homogenization of consumer behavior is important, and studies indicate that cultural differences remain stable or become even stronger (e.g., de Mooij & Hofstede, 2002).

Based on these assumptions, the analysis of cross-cultural orientations on an individual level is a more fitting measurement of cross-cultural differences in individual behavior. Singelis, Triandis, Bhawuk, and Gelfand (1995) proposed focusing on the two most important dimensions for cross-cultural differences—individualism versus collectivism and horizontal orientation versus vertical orientation (or power distance, with respect to Hofstede's [2001] inventory)—to measure cross-cultural orientations on the individual level. The first dimension (individualism versus collectivism) is related to the coordination of the needs of the individual with group or community goals and norms, whereas the second dimension (horizontal versus vertical orientation) addresses the issue of inequality among people. Additionally, more recent studies addressing cross-cultural differences suggest that future research should not rely on these two dimensions as separate cultural orientations but should instead consider them as a combination (Chirkov, Lynch, & Niwa, 2005; Shavitt, Lalwani, Zhang, & Torelli, 2006; Sivadas, Bruvold, & Nelson, 2008).

According to Shavitt et al. (2006), the resulting four categories can be distinguished by their motives. Individuals with high horizontal and individualistic (IH) orientation strive to be distinct and separate from each other and to express their uniqueness. By contrast, individuals with high individualistic but vertical (IV) orientation tend to improve their status through competition and aim to stand out over others and display their status. Individuals with a collectivist and horizontal (CH) orientation aspire to have common goals with others, tend to behave in socially appropriate ways, and seek cooperation. Individuals in the last group, with high vertical and collectivist (CV) orientation, tend to protect their in-group status and seek conformity. These four combinations of the HV and IC dimensions allow us to see more subtle differences between nations instead of relying merely on separate dimensions. The analysis of cross-cultural differences in decision making involving media products is thus expanded by a consideration of these measurements of cultural orientations as we evaluate which operationalization can best address possible cultural implications.

Research Questions and Hypotheses

Although previous studies have already demonstrated that e-WOM is a popular information source for consumer decisions across the world (Goodrich & de Mooij, 2014), how the use and evaluation of different types of e-WOM are shaped by cross-cultural differences remain unclear. The differences in the information-processing and decision-making modes between collectivistic (Asian) and individualistic (Western) cultures suggest that cultural orientation affects the preference of either the heuristic (aggregate, ratings) or systematic (individual reviews) processing of e-WOM. However, two opposing assumptions appear to be plausible. On one hand, the assumption that individuals do not only rely on aggregate user information during movie selection but rather refer to user reviews that offer detailed information and allow for more contextualized decision making is based on the collectivistic culture's mode of holistic information processing. As a result, we propose H1a:

H1a: The use of individual reviews (triggering a quality-motivated bandwagon) is expected to be more prevalent among individuals with collectivistic cultural orientations, whereas the use of aggregate user information, representing more focused information (triggering a quantity-motivated bandwagon), is expected to be more prevalent among individuals of individualistic cultures.

However, we have to balance this hypothesis with the assumption that a contextualized, holistic manner of reasoning is associated with heuristic processing in contrast to rule-based, analytic information processing related to systematic processing, which would lead to the opposite hypothesis (H1b):

H1b: The use of individual reviews (triggering a quality-motivated bandwagon) is expected to be more prevalent among individuals with individualistic cultural orientations, whereas the use of aggregate user information, which represents more focused information (triggering a quantity-motivated bandwagon) is expected to be more prevalent among individuals from collectivistic cultures.

This potential contradiction appears because the holistic versus analytical mode of thinking and the dual process theory of information processing have not yet been successfully integrated. For our empirical work, we start to answer this open question by testing both alternative hypotheses. In addition, research addressing cross-cultural differences in JDM focuses mainly on the dualistic distinctions between individualistic-independent (Western) and collectivistic-interdependent (East Asian) cultures but does not consider the combinations of cultural orientations, such as the four dimensions proposed above that combine independence and collectivism with an individual's tendency toward horizontal and vertical orientations. The types in this matrix are closely related to the tendency to apply a mere country proxy to measure cross-cultural differences in comparing (East) Asian with Western (U.S.) individuals.

Based on these considerations, the empirical study addresses the following key aspects. First, this study relies on a cross-country analysis, which has been applied most often in previous research, to connect to previous research that examines cross-cultural differences in JDM. We first compare two Western countries as representatives of individualistic cultures with an East Asian country as a representative of a collectivist culture. This comparison allows us to investigate how far cross-cultural differences in information processing can be transferred to the use of e-WOM and online media products with respect to nonmedia contexts (H1a and b).

Second, with respect to the above-mentioned shortcomings of the reliance only on a geographical (country) proxy to address cultural orientations, a research question aims to examine the use of individual measures to address individual cultural orientations. Shavitt et al.'s (2006) distinction of the four dimensions of cultural orientation will be employed to allow us to address more subtle cross-cultural differences among individuals and to study individual cultural orientations. RQ1 reads as follows:

RQ1: Are individual measures of cultural orientation more suitable for addressing cross-cultural differences in information preference during online movie selection than proxy variables, such as country of origin?

Method

Study Design and Participants

This study is part of a research project on movie selection from a cross-cultural perspective. We carried out an online survey in three countries (Germany, Singapore, and the United States) presenting users with manipulated ratings and reviews of generic movie titles.

Participants

Data were collected from communication undergraduate students in three major universities in Singapore, the United States, and Germany. The survey was conducted in English for the U.S. and Singaporean respondents. A German version of the questionnaire was developed for data collection in Germany. Participants were recruited through student mailing lists and course announcements. The participants in Singapore received monetary incentives for their participation. The participants in the United States were given course credits. The participants in Germany received either course credits or monetary incentives, which were donated to charities of their choice. After eliminating incomplete questionnaires, the sample contained 694 participants, with 315 Singaporeans (M age = 20.28, SD = 1.22, 58% female), 215 Americans (M age = 20.28, SD = 1.60, 47% female), and 164 Germans (M age = 21.48, SD = 2.75, 85% female²).

Procedure

Participants were informed that the study examines the movie preferences of students and their use of video-on-demand services. Six descriptions of movies that displayed conflicting aggregate (star rating) and individual user reviews were created to test the participants' preferences for using aggregate e-WOM heuristic processing or individual user reviews related to systematic information processing in selecting movies to watch. The movie descriptions displayed the name of each movie, the number of views (which we kept constant for the six movie descriptions presented), and a manipulation of the star ratings and written reviews based on real movie reviews from online movie websites. In three cases, the movie displayed a five- or four-star rating and four written reviews that were neutral or negative. For the other three movies, lower overall ratings (two or three stars) were contrasted with very positive reviews. These conflicting information cues were used to examine the heuristic (star rating) versus systematic (reviews) information processing by measuring each participant's evaluation of a specific movie. Individuals who prefer aggregate e-WOM (quantity-motivated bandwagon) are assumed to be more likely to select movies with high star ratings and negative reviews over movies with lower star ratings and positive reviews, whereas the opposite is expected for individuals who prefer individual e-WOM (quality-motivated bandwagon).

² The high number of German female participants can be attributed to the higher proportions of female students in most of the communication studies programs in Germany (Prommer, Lueningborg, Matthes, Mögerle, & Wirth, 2006).

Measures

Evaluation of Movies. Participants were asked to indicate their desire to watch each of the six sample movies on a five-point Likert scale ranging from 1 (do not want to watch this film at all) to 5 (would like to watch this film very much). For the analysis, two index variables were calculated summarizing the three movies with a high star rating (Eva_highstar_movie; $M = 3.09$, $SD = 0.93$, $n = 694$) and the three movies with low star ratings and positive reviews (Eva_lowstar_movie; $M = 3.09$, $SD = 0.74$, $n = 694$). A variable (Pref_highstar_movie) was also calculated to indicate participants' overall preference for the better rated movie. The calculation was conducted by subtracting the average low-star score from the average high-star score, resulting in a new score ranging from +4 (high_star = 5 minus low_star = 1) to -4 (high_star = 1 minus low_star = 5) and a mean of 0.00 ($SD = 1.28$, $n = 694$).

Cultural Orientation. In measuring the cultural orientation of individuals, we relied on Chirkov et al.'s (2005) scenario questionnaire, which is designed to study cultural orientations in an academic setting and is based on scales used in previous studies that measure the four dimensions—HI, VI, HC, and VC—of cultural orientation (Triandis & Gelfand, 1998). The instrument comprises 12 short scenario questions that measure different culturally relevant constructs. Each scenario provides a short description of a situation followed by four options, each representing one of the four cultural orientations. Participants were asked to indicate the level of agreement with each of the four options ranging from 1 (strongly disagree) to 5 (strongly agree). For example:

A student is going over graduate program brochures in order to decide which program to attend. What is the most important factor in making this decision?

1. It is a very competitive program and one of the best. (VI)
2. The student's professor/supervisor approves of it. (VC)
3. It is the program most of student's classmates are going to. (HC)
4. It is the program that fits student's interests and needs most. (HI)

The original English version of the scale was used for the American and Singaporean participants. The scale was translated into German and checked by using the back-translation suggested by Brislin (1970) because the scale is not yet available in German. The reliability of the scale was generally acceptable. However, alpha values were the lowest for German participants and highest for American participants. This result could be caused by the translation process and the fact that the scale was originally developed for a U.S. university context³: VC $\alpha = .79$, $n = 694$; HC $\alpha = .68$, $n = 694$; HI $\alpha = .79$, $n = 694$; and VI $\alpha = .82$, $n = 694$ (for alpha values per country, refer to Table 2).

Sociodemographics. As an origin indicator, the participants' country of residence (Singapore, United States, Germany), age, and gender were self-reported.

³ For each dimension, one item was dropped to increase internal consistency, resulting in 11 items for each dimension.

Results

Descriptive Findings

The comparison of the evaluation of the movies with high star ratings (and negative user reviews) and low star ratings (and positive user reviews) in each country allowed us to observe some cross-cultural differences in the preferences for the two types of e-WOM (Table 1). American participants had the highest tendency to rely on information from the aggregate bandwagon related with the heuristic processing of information. In contrast, Singaporean participants appeared to be more focused on the reviews. The German participants appeared to have similar focus as the Singaporean participants.

Table 1. Evaluation of Movies per Country.

Country	Movies with high aggregate user ratings (stars) and negative reviews	Movies with low aggregate user ratings (stars) and positive reviews	<i>t</i> test for high vs. low star ratings per country
Singapore (<i>n</i> = 315)	3.04 (<i>SD</i> = .87)	3.18 (<i>SD</i> = .72)	<i>t</i> = -1.95, <i>df</i> = 314, <i>p</i> = .052
U.S. (<i>n</i> = 215)	3.51 (<i>SD</i> = .88)	2.99 (<i>SD</i> = .80)	<i>t</i> = 6.52, <i>df</i> = 214, <i>p</i> < .001
Germany (<i>n</i> = 164)	2.61 (<i>SD</i> = .86)	3.03 (<i>SD</i> = .68)	<i>t</i> = -4.25, <i>df</i> = 163, <i>p</i> < .001
Total	3.08 (<i>SD</i> = .93)	3.08 (<i>SD</i> = .74)	

The results of the one-factorial ANOVA indicated significant differences in the evaluations of the movie with high star ratings when comparing the three countries (high star movie: $F = 49.82$, $df = 2$, $p < .001$). The Games Howell post-hoc test was employed to address the country differences, and a $p < .05$ significance level was reported. Similar to the previous results, the individual differences for the three countries were also significant ($p < .001$) for the movies with high star ratings. For the movies with low star ratings, significant differences were found when comparing the three countries ($F = 4.92$, $df = 2$, $p = .008$). The post-hoc test revealed significant differences between Singapore and the United States ($p = .014$), whereas the differences between Singapore and Germany ($p = .065$) and between Germany and the United States were not significant ($p = .847$).

An examination of individuals' cultural orientations based on the four dimensions revealed different patterns of cultural orientations in the three studied countries (see Table 2). Interestingly, the score averages of the participants from all three countries were highest for horizontal individualism, indicating that being self-directed and expressing uniqueness may be universally highly valued by university students.

Table 2. Cultural Orientations per Country.

Country	VC	HC	HI	VI
Singapore (<i>n</i> = 315)	3.25 (<i>SD</i> = .48) <i>a</i> = .73	3.64 (<i>SD</i> = .39) <i>a</i> = .64	4.2 (<i>SD</i> = .38) <i>a</i> = .72	3.23 (<i>SD</i> = .55) <i>a</i> = .80
U.S. (<i>n</i> = 215)	3.45 (<i>SD</i> = .62) <i>a</i> = .80	3.51 (<i>SD</i> = .58) <i>a</i> = .78	4.13 (<i>SD</i> = .61) <i>a</i> = .87	3.54 (<i>SD</i> = .57) <i>a</i> = .76
Germany (<i>n</i> = 164)	2.71 (<i>SD</i> = .49) <i>a</i> = .68	3.32 (<i>SD</i> = .41) <i>a</i> = .54	4.46 (<i>SD</i> = .31) <i>a</i> = .53	2.65 (<i>SD</i> = .55) <i>a</i> = .71
Total	3.18 (<i>SD</i> = .60) <i>a</i> = .79	3.53 (<i>SD</i> = .48) <i>a</i> = .68	4.24 (<i>SD</i> = .47) <i>a</i> = .79	3.21 (<i>SD</i> = .65) <i>a</i> = .82

The results of the one-factorial ANOVA test show significant differences in the participants from the three countries on all four cultural dimensions (VC: $F(2,691) = 94.40, p < .001$; HC: $F(2,691) = 26.95, p < .001$; HI: $F(2,691) = 28.02, p < .001$; VI: $F(2, 691) = 121.69, p < .001$). The Games Howell post-hoc test was also employed to address country differences, and a $p < .05$ level was reported. For VC and VI, individual differences between the countries were highly significant ($p < .001$). For the HC dimension, the post-hoc test revealed highly significant differences between Germany and Singapore and between Germany and the United States ($p < .001$), whereas differences between the United States and Singapore were significant ($p = .013$). For HI, significant differences were found between Singapore and Germany and between the United States and Germany. The differences between the United States and Singapore were not significant ($p = .230$). The overall results of the post-hoc test show that the American and Singaporean participants had less distinct cultural orientations (especially in the HI and the HC dimensions to a lesser degree) than the German participants.

Regression Analysis

Hierarchical regression analysis was carried out using the combined measure of the two types of e-WOM (pref_highstar) as an dependent variable to study each individual's preference for either aggregate star ratings or individual reviews (H1a and b) and to compare the application of individual measures of cultural orientation to proxy measures (RQ1). The participant's country of residence (as a dummy variable) and the four dimensions of individual cultural orientation were included as independent variables in the second and third blocks. Sociodemographic variables were included as control variables in the first block (see Table 3).

Results of the regression analysis further reinforce the descriptive findings of differences in e-WOM preferences across cultures. Entering participants' countries of residence in block 2 led to a significant increase in the explained variance, indicating that participants' origins had a significant effect

on their preferences for different types of e-WOM. For the Singaporean and German participants, a negative effect on preferences for high star movies was observed (see Table 3), suggesting that participants were less likely to refer to aggregate e-WOM than to individual user reviews during movie evaluation. In contrast, Americans exhibited a strong preference for aggregate movie ratings ($\beta = .238$,⁴ $t = 6.40$, $p = <.001$), which is related to a quantity-motivated bandwagon effect. Thus, we found support for H1a, indicating that individuals from a collectivistic Asian cultural context exhibit stronger preferences for more detailed e-WOM information. However, we could not find a clear pattern for the corresponding effect on Western participants. The findings from the American participants supported H1a, whereas the findings from German participants followed the opposite of what was described in H1b.

Table 3. Hierarchical Regression Analysis on the Preference for Movies with High Star Ratings.

		<i>Pref_highstar movie</i>		
		β	t	p
Step 1:				
	Age	-.065	-1.72	.085
	Gender	-.206	-5.44	.000
$F(2,693) = 15.124$, adj. $R^2 = .039$, $p < .001$				
Step 2				
$\Delta F: p < .001$				
	Age	-.016	-.42	.674
	Gender	-.139	-3.55	.000
	If Singapore	-.239	-5.67	.000
	If Germany	-.259	-5.64	.000
$F(4,693) = 18.68$, adj. $R^2 = .093$, $p < .001$				
Step 3				
$\Delta F: p = .009$				
	Age	-.012	-.310	.756
	Gender	-.112	-2.77	.006
	If Singapore	-.223	-5.06	.000
	If Germany	-.169	-3.11	.002
	Cult_orientation_VC	-.018	-.32	.753
	Cult_orientation_HC	.066	1.42	.157
	Cult_orientation_HI	-.070	-1.68	.094
	Cult_orientation_VI	.133	2.34	.020
$F(8,693) = 11.19$, adj. $R^2 = .105$, $p < .001$				

With respect to RQ1, our findings demonstrate that including individual measures of cultural orientation (based on four dimensions) leads to a significant increase in explained variance in the model. We are interested in explaining the individual effect of each of the four cultural orientations. The regression weight indicated in Table 3 may be skewed because all four correlate strongly with each other

⁴ Beta values are based on a regression of age, gender, and a dummy variable of U.S. = 1, other country = 0 on preference for high star ratings. Table 3 uses two dichotomous variables to measure country of residence for all three countries.

(i.e., VC and VI with $r = .731$ [$p < .001$] and VC and HC with $r = .534$ [$p < .001$]). Therefore, we repeated step 3 of our analysis in a path model (maximum likelihood estimation) and allowed for the four cultural orientations to correlate with each other. We employed bootstrapping with $n = 1,000$ samples and indicated 95% confidence intervals based on a bias-corrected percentile method. Of the four cultural orientations, VI remained the only significant estimator with $\beta = .133$ (.018, .248; $p = .021$). This finding suggests that individuals with high vertical individualism (VI) scores have a higher tendency to refer to aggregate user rating when evaluating movies online. Among the remaining three cultural orientations, horizontal individualism (HI) is likely to have a negative effect on the preference for movies with high star ratings, with $\beta = -.070$ (-.154, .005; $p = .068$), suggesting that individuals with high scores in this dimension have a stronger preference for written user reviews. Because the bootstrap estimates contain 0, the findings for HIs were not significant at $\alpha = 95\%$ but should be analyzed further.

Discussion

General Discussion

This study addressed cross-cultural differences in media users' preferences for either aggregate (quantity-motivated bandwagon) or individual (quality-motivated bandwagon) e-WOM information during movie selection online (H1a and b). The two types of e-WOM were associated with distinct manners of information processing in the sense that aggregate e-WOM (star rating) triggers heuristic information processing, whereas individual e-WOM (user reviews) triggers systematic information processing. Results indicated differences among the participants from three countries. The findings specified a clear difference between participants in the United States (a Western cultural context) and Singapore (an Asian cultural context). The U.S. participants demonstrated a preference for aggregate user information, favoring movies with high star ratings, whereas the Singaporeans favored movies with positive user reviews (as assumed in H1a). This result is in line with prior findings in the JDM research, which indicated that individuals in Asian cultures tend to use holistic and more contextualized means to process information compared to people in Western cultures, who are more likely to use an analytical approach in processing information. As a result, the U.S. participants' preference of aggregate user information might trigger a quantity-motivated bandwagon effect, whereas the Singaporean participants' preference might result in a quality-motivated bandwagon effect, making them more susceptible to exemplar effects (Zillmann & Brosius, 2000). By contrast, German participants did not fall into the assumed pattern of Westerners favoring heuristic information processing and tended to rely on written user reviews in their movie evaluations. The participants from the two Western countries did not appear to follow the same logic in their decision making, which can be interpreted as a first hint that a simple geographical distinction of Western versus Asian countries is limited to an extent suitable for addressing cultural effects in individual decision making and information processing.

The results of this study, which addressed cross-cultural effects on different styles of information processing, may stimulate further research in two areas. First, with regard to the research focusing on the cross-cultural aspects in individuals' movie selection, our findings point to the necessity of a closer examination of the decision-making process itself. As our findings show, not only product preferences but also the ways individuals make their decisions are shaped by cultural tastes. This result would allow future

researchers to go beyond the existing approaches to evaluating movie selection across nations, which tend to focus on genre preference and cultural proximity (Fu, 2012). Second, with regard to the more general theoretical outline of this study, cross-cultural differences in information processing found in movie selection are expected to be evident in selection of other types of experience goods too. Thus, future research may explore how individual consumers in different cultural contexts differ in how they use information and make decisions when selecting a place to dine or evaluating the trustworthiness of online information (e.g., Song et al., 2016).

For further analysis and from a methodological standpoint, this study investigated whether individual measures are better suited to addressing the effects of cultural orientations on e-WOM preferences than proxy indicators, such as country of residence. When evaluating preferences on the four-dimensional scale that accounts for the interactions between individualism and collectivism and horizontal and vertical orientations revealed that contrary to the expectations suggested by the findings from Hofstede's (2001) cultural orientation inventory study, participants from Singapore and the United States showed less distinct individual cultural orientations than participants from the two Western countries, Germany and the United States. For instance, the Germans scored highest for the HI dimension and lowest for VI. This result lends further support to Shavitt et al.'s (2006) finding of a clear distinction between VI societies, such as the United States, where individuals distinguish themselves from others via competition, and HI societies, where individuals view themselves as independent and unique but equal in status to others. Additionally, similarities in the Singaporeans' and Americans' cultural orientations point to cultural convergence processes that have been reported with regard to work and education programs in previous studies (Armstrong & Krasnostein, 1995; Caza & Posner, 2014).

More importantly, the use of individual cultural orientation measures in examining the cultural effects on the information processing and selection of media goods (RQ1) resulted in a significant increase in the explained variance compared to proxy measures, such as country of residence. The positive relation of VI to a preference for aggregate e-WOM could be demonstrated further, meaning that individuals who scored high in VI have a stronger tendency to refer to star ratings during movie selection. For HI, hints were found of its negative relation to a preference for aggregate e-WOM, suggesting that individuals who scored high in this dimension tend to exhibit a stronger preference for individual user reviews.

Limitations

Methodological issues, especially those related to research design, such as construct, measure, and sampling equivalence, pose a serious concern in cross-cultural research (Buil, de Chernatony, & Martínez, 2012). This study relied on previously used scales to measure cultural orientations and ensure a high level of construct equivalence. With respect to the object of research, this study relied on the evaluation of video-on-demand movies because VoD is a form of media entertainment used widely by young audiences in all three countries under study. As to the sampling equivalence, communication students were selected to obtain a rather homogeneous set of participants. However, some limitations with respect to the measure equivalence need to be noted. The scale employed to address cultural orientations of the student participants resulted in alpha scores for the German participants that were lower than the normally proposed cutoff of .6 (see Schmitt, 1996). This discrepancy can be attributed to

translation problems (Sechrest, Fay, & Zaidi, 1972) despite the translation process being carried out with care, using the back-translation method. As the questionnaire relied on short scenarios representing situations that might be common in U.S. students' everyday lives, these questions might represent situations that occur in the German context only to a limited extent. In addition, the unexpectedly strong similarities between the cultural orientations of the Singaporean and American participants might also be related to the use of the same language (English). Previous research on methodological issues in cross-cultural research have pointed out that language has a significant effect on triggering cultural domains (Ji, Zhang, & Nisbett, 2004). Therefore, future research might address these methodological challenges by (a) translating the instrument into the participants' mother tongue to better detect participants' cultural orientations, (b) selecting cultural contexts that have been less influenced by multiculturalism and Westernization, especially with regard to education and work systems (e.g., Japan, Malaysia, mainland China), and (c) developing and testing measures of individual cultural orientation adapted to the specific cultural context to better address specifics in cross-cultural orientations.

Some limitations in the study's design also need to be noted. With respect to our theoretical outline, we aimed to analyze distinct methods of information processing: heuristic (based on the cue of aggregate star rating) and systematic (based on written reviews). First, our scenario-based approach was limited to scenarios presenting conflicting information, which were chosen mainly for practical reasons (length of questionnaire). For future studies, including scenarios with consistent information to detect possible further cross-cultural differences in the preference of different types of e-WOM information (all high or low) might be helpful. Second, our study design allowed us to measure the results of the decision-making process (comparing the movies selected) that we interpreted as either heuristic or systematic processing. We did not probe into the actual information processing itself by asking participants to indicate what types of information actually influenced their decisions. Future research should develop instruments to investigate the actual decision-making process, such as time- or eye-tracking technology and postsurvey interviews.

Conclusion

Focusing on the use of e-WOM and related types of information processing (heuristic versus systematic) during movie selection, this study examined whether the cross-cultural differences found in the JDM research can be applied to the selection of media products online, such as digital movies. From a methodological point of view, the use of individual measures of cultural orientation instead of simple country proxy indicators in explaining the effect of cultural orientations on media product selection distinguishes this study from similar cross-cultural comparison studies. The results of our study point to clear differences in the American, Singaporean, and German participants' preferences of e-WOM information in movie selection. The American participants showed a strong preference for aggregate e-WOM, suggesting heuristic information processing, whereas the Singaporean and German participants tended to rely on individual e-WOM, suggesting systematic information processing. In terms of the effects of cultural orientations on these preferences, the use of a four-dimensional measure of individual cultural orientations provided us with greater power to explain the differences in the information processing of people from different cultures than a simple country proxy measure would have.

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