

Available online at www.sciencedirect.com**ScienceDirect**

Journal of Consumer Psychology xx, x (2014) xxx–xxx



Research Article

Sins of omission versus commission: Cross-cultural differences in brand-switching due to dissatisfaction induced by individual versus group action and inaction☆

Sharon Ng ^{a,b,1}, Hakkyun Kim ^{c,*,2}, Akshay R. Rao ^{d,3}^a *Nanyang Business School, Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798, Singapore*^b *Institute of Asian Consumer Insights, Nanyang Business School, Nanyang Technological University, Singapore*^c *School of Business, Sungkyunkwan University, 25-2 Sungkyunkwan-ro, Jongno-gu, Seoul 110-745, South Korea*^d *Carlson School of Management, University of Minnesota, 321 19th Avenue South, Minneapolis, MN 55455, USA*

Received 13 January 2013; received in revised form 9 July 2014; accepted 18 July 2014

Abstract

We examine how brand-switching varies across cultures, depending on the drivers of a prior unsatisfactory consumption experience. We draw from the literature on regret, norm theory and cross-cultural psychology to predict that Westerners are more likely to switch brands when the unsatisfactory consumption experience is a consequence of their inaction relative to the inaction of a group to which they belong. In contrast, it is predicted that Easterners are more likely to switch brands when the unsatisfactory consumption experience is a consequence of inaction on the part of the group to which they belong relative to their own inaction. We discuss the relevance of our research for marketing theory, the need to account for cultural differences in consumer segments, and the implications for organizations targeting culturally distinct market segments, both domestically and internationally.

© 2014 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.

Keywords: Brand-switching; Regret; Action–inaction; Culture; Group decision-making; Multinational marketing strategies**Introduction**

Firms contemplating entering international markets, or those faced with a culturally diverse set of consumers, both domestically and internationally, often encounter vexing marketing

questions. One topic of acute theoretical and practical significance is how firms choose to communicate with culturally diverse segments. On the one hand, a firm may employ largely similar persuasive messages that convey an identical appeal to all segments, regardless of cultural differences. An alternative approach would be to customize the persuasive message to each market segment.

Emerging research in cross-cultural psychology and consumer behavior reveals important differences in how Easterners and Westerners view themselves and their social environment. These differences imply that nuanced approaches to persuasion, when leveraged correctly, can often influence consumers' cognitive, emotional, and behavioral responses to marketing stimuli (Chen, Ng, & Rao, 2005). Building on the literature suggesting that it is frequently beneficial for a firm to account for cultural differences among its various consumer segments,

☆ This research was supported by Samsung Research Fund, Sungkyunkwan University, 2013 (awarded to H. Kim) and Nanyang Technological University (awarded to S. Ng). The authors are indebted to seminar audiences at the University of Illinois, Champaign–Urbana, and the University of Texas, Austin, as well as Ying-Yi Hong and Bob Wyer for valuable comments on an earlier version of this manuscript.

* Corresponding author. Fax: +82 2 760 0950.

E-mail addresses: angsl@ntu.edu.sg (S. Ng), hakkyunkim@skku.edu (H. Kim), arao@umn.edu (A.R. Rao).¹ Fax: +65 6791 3697.² Fax: +82 2 760 0950.³ Fax: +612 624 8804.<http://dx.doi.org/10.1016/j.jcps.2014.07.003>

1057-7408/© 2014 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.

we focus on how a firm may limit or enhance brand-switching among culturally diverse consumers, depending on the firm's strategic objectives. We demonstrate that cultural differences can yield substantial variation in consumers' responses to a firm's attempts to enhance or limit brand-switching following an unsatisfactory consumption experience. Indeed, a firm that is unaware of these subtleties might engage in inadvisable or inappropriate corrective action following consumer dissatisfaction.

Our inquiry draws from research that documents the existence of cross-cultural differences in people's lay theories of "agency." In particular, "conceptions of [the] kinds of actors, [and] notions of what kinds of entities act intentionally and autonomously" (Morris, Menon, & Ames, 2001, p. 169) differ among cultures. Research shows that Westerners tend to view the individual as a more important decision-making entity than a group and are likely to ascribe agency to individuals, while Easterners tend to view groups as the more important decision-making entity and are likely to ascribe agency to the collective (Chiu, Morris, Hong, & Menon, 2000; Markus & Kitayama, 1991; Spencer-Rodgers, Williams, Hamilton, Peng, & Wang, 2007). However, it remains unclear as to how these differences in the ascription of agency might influence consumer brand choices. It is this lacuna that we seek to address in this research.

We examine cultural differences in the ascriptions of agency within a consumption context and posit that, following an unsatisfactory consumption experience generating regret, Westerners will emphasize the role of the individual in the original decision that yielded the regret-inducing experience, whereas Easterners will emphasize the role of the group in the original decision that resulted in the regret-inducing experience. We further argue that Westerners who have an unsatisfactory experience *because the individual decision-maker failed to act* will experience greater regret and will display higher brand-switching intentions, because individuals (more so than groups) are viewed as a decision-making entity and are expected to act. Conversely, Easterners who have an unsatisfactory experience *because the group failed to act* will experience greater regret and will display higher brand-switching intentions, because the group (more so than an individual) is viewed as a decision-making entity and is expected to act. Thus, we propose that the degree of brand-switching intention that one displays is determined by one's cultural orientation, the decision-making entity (i.e., whether an individual or a group made the decision), and whether the decision-making entity (the agent) acted or failed to act.

We offer two principal contributions. Theoretically, to the best of our knowledge, this research is among the first to consider the impact of individual versus group agency on brand-switching. We demonstrate the role of an individual's action and inaction on brand-switching behavior, and a reversal of the effect when the group is the agent. This research also contributes to the literature on implicit theories of agency and attribution by examining the psychological processes that underlie the differential regret that is experienced when either an individual or a group acts or fails to act. Managerially, the

insights gleaned from this research can be applied to several contexts, from traditional management-related issues (such as groupthink and team performance) to recently burgeoning ones (such as collective buying or social commerce). In general, the demonstration that cultural differences can yield substantial variation in consumers' responses to a firm's attempts to enhance or limit brand-switching following an unsatisfactory consumption experience ought to be of considerable interest to firms addressing culturally diverse markets. We now turn to the development of our theoretical framework.

Theoretical framework

Implicit theories of agency

Implicit theories of agency refer to individuals' conceptions of which social actors possess the dispositions and autonomy to act (Menon, Morris, Chiu, & Hong, 1999). Conceptions of agency allow individuals to make sense of the world because they allow people to infer the source of planned action (Bratman, 1991; Morris et al., 2001; Taylor, 1985). When a particular outcome or event is attributable to the action of an agent, the agent is assumed to have acted in the hope of achieving a goal. Thus, when an individual is perceived to be the agent, observers are likely to infer that any outcome due to the individual's action is a result of that individual's disposition.

It has been argued that people's theories of agency are heavily influenced by their cultural experiences and social contexts (Morris et al., 2001). Since the manner in which autonomy manifests itself in societies can be traced to historic beliefs about individuals versus groups, the degree to which individuals ascribe autonomy to either an individual or a group differs across cultures. Specifically, Western societies have traditionally believed in the individual as an independent, self-interested person with autonomy over his or her own behavior and tend to subscribe to the perspective that individuals are the agents of action (Chiu et al., 2000; Menon et al., 1999). Several research findings have supported this view. For instance, Kashima, Siegal, Tanaka, and Kashima (1992) found that, compared to the Japanese, Australians are more likely to believe that there exists a causal link between an individual's attitude and behavior, suggesting that Westerners tend to think more about individual-level factors, while attending less to situational or group-level factors.

For members of Eastern societies, on the other hand, the tendency is to assume that individuals' dispositions are fluid (Chiu, Hong, & Dweck, 1997; Kashima et al., 2004). Easterners tend to have a lower sense of individual control over their destiny and place greater emphasis on group control (Fiske, Kitayama, Markus, & Nisbett, 1998). This is partially a function of Confucian conceptions of society. Confucian thought conceives of an individual as one who derives both "role and awareness from the social collective to which he or she belongs" (Menon et al., 1999, p. 703). In such societies, individuals tend to behave as a "community man," in tandem with social expectations and consensus. Thus, groups in Eastern cultures tend to be powerful enough to influence the individual's behavior and

beliefs. Consistent with the predominance of collectives in Eastern cultures, research shows that Easterners conceive of groups as more agentic than individuals (Kashima et al., 2005; Menon et al., 1999), and they are more likely to see social groups as having greater agency than individuals (Morris et al., 2001; Spencer-Rodgers et al., 2007). For example, Menon et al. (1999) found that a Japanese newspaper, when reporting business scandals, tended to focus on organizations rather than on individual actors.

Extant research, therefore, appears to document the existence of systematic differences in peoples' theories of agency across cultures. However, the psychological implications of such cross-culturally diverse theories of agency remain unclear. Will people in different cultures who experience unsatisfactory consumption outcomes construe the role of the individual or the group responsible for decisions that yielded that outcome differently? Drawing from the literature on regret, we propose that the amount of regret one experiences will differ, depending on one's perception of agency.

Regret

Individuals may experience a "sense of sorrow, disappointment, or distress over something done or not done" (Landman, 1987, p. 524), when realizing or imagining how one's current status could be better. Such an unpleasant feeling that reflects an unfavorable assessment of one's current state due to a prior decision is called regret (Zeelenberg & Pieters, 2007), and such regret may often occur due to counterfactual thinking (CFT), a thinking process typified by a construction of alternatives that are literally contrary to the facts (Roese, Sanna, & Galinsky, 2005).

A key factor in determining whether an unsatisfactory assessment of one's current state activates regret is whether the individual can successfully *imagine* changing the outcome if s/he had behaved differently, or "the relative ease with which elements of reality can be cognitively altered" (Roese & Olson, 1995, p. 7). For example, Kahneman and Tversky (1982) observed that ninety-six percent of subjects believed a passenger who missed his flight by 5 min would be more upset than one who missed his flight by 30 min, because the chain of events leading to a five-minute delay is relatively more *mutable*.

However, not all chains of events are similarly mutable. Rather, some unsatisfactory outcomes may lead to contemplating the mutation of an *action* (i.e., wondering how outcomes might be different if one had *not done* something instead of having done something), while other unsatisfactory outcomes may lead to contemplating the mutation of an *inaction* (i.e., wondering how outcomes might be different if one had *done* something instead of having stayed passive). Which form of mutation eventually occurs depends on whether acting versus staying passive is the standard behavioral norm (Kahneman & Miller, 1986). For instance, for most drivers, taking the usual route to a regular destination is typical behavior. Consequently, people tend to generate greater counterfactual thoughts when an accident occurs if a driver takes an unusual route home (Kahneman & Miller, 1986; Miller & McFarland,

1986). Conversely, in some situations, people expect the odds of success to increase if they engage in a certain set of actions (e.g., getting good grades if s/he engaged in smart study habits). In such situations, people would feel more regret when a negative outcome occurs because they did not engage in the normal action (Hattiangadi, Medvec, & Gilovich, 1995; Kinnier & Metha, 1989). Thus, behaving in a manner consistent with prevailing norms is expected and unsurprising (whether the behavior is action or inaction), and even when such behavior yields an unhappy outcome, less regret ought to be felt (Inman & Zeelenberg, 2002). Conversely, behaving in a manner *inconsistent* with prevailing norms is not expected and is surprising, and when such behavior yields an unhappy outcome, more regret ought to be felt.

Building on these arguments, we propose that since Easterners and Westerners have differing theories of agency, whether the decision leading to the regret-inducing event was one made by the individual (or group), and whether that individual (or group) acted or stayed passive ought to generate different degrees of regret, because the norms associated with decision-making agency differ across cultures. We develop this reasoning next.

Culture, agency, and regret

The norm in the West is for individuals, not groups, to engage in an action. If indeed, Westerners conceive of individuals as the agent responsible for action, when an individual's *failure to act* yields a negative outcome, the outcome will generate a relatively high degree of regret, since it involves a norm violation and is thus more mutable. Similarly, since groups or social collectives are presumed to be less of an agent, a negative outcome that occurs due to the group's (versus the individual's) *action* should generate a relatively high degree of regret, since a group taking action is a violation of a norm and is thus more mutable.

The opposite pattern is expected among Easterners. Since people in collectivistic cultures are likely to conceive of groups as agents more so than individuals, and expect collective action, a negative outcome that occurs because the group (versus individual) *fails to act* should generate a relatively high degree of regret, since a group is expected to act, and thus, not acting is a violation of the norm and thus more mutable. Conversely, Easterners do not expect individuals to act. Therefore, a negative outcome that occurs when an individual (versus group) does act should generate a relatively high degree of regret, since an individual acting independently is a norm violation, and therefore more mutable. Thus:

H1a. Westerners will experience greater regret when an unhappy outcome occurs due to: i) an individual's inaction versus a group's inaction; or ii) a group's action versus an individual's action.

H1b. Easterners will experience greater regret when an unhappy outcome occurs due to: i) a group's inaction versus an individual's inaction; or ii) an individual's action versus a group's action.

Marketing implications: brand-switching

To the extent that the chain of events yielding the unhappy outcome can be altered, the individual can *imagine* changing the outcome. In fact, the individual can *prepare* to behave differently (e.g., leave home earlier to catch one's flight) in the future, so as to avoid the unhappy outcome. This phenomenon, of planning to behave differently in order to *mutate* outcomes is termed the *preparative function* of CFT. People can prepare to behave differently when faced with a similar set of circumstances in the future if they feel that such a modification in behavior might change the unhappy outcome (Roese, 1994). In a marketing setting, this preparative function of counterfactual thinking and regret may manifest as brand-switching, because it is feasible to imagine that an unsatisfactory experience might be avoided if one were to switch brands on the next purchase occasion (Hetts, Boninger, Armor, Gleicher, & Nathanson, 2000; Inman & Zeelenberg, 2002; Krishnamurthy & Sivaraman, 2002). Thus, we propose that Westerners will be inclined to switch brands when an unsatisfactory experience can be attributed to an individual's inaction or group action with respect to brand choice (i.e., the individual retained the status quo brand or the group selected a different brand than usual), as these decisions likely will generate a higher degree of felt regret. On the other hand, Easterners will be more likely to switch brands when an unsatisfactory experience can be attributed to an individual's action or group's passivity with respect to brand selection (i.e., the individual selected a different brand than usual or the group retained the status quo brand). Therefore:

H2a. Westerners dissatisfied with their purchase will be more likely to switch to another brand when the poor product performance is attributed to: i) an individual's inaction versus a group's inaction; or ii) a group's action versus an individual's action.

H2b. Easterners dissatisfied with their purchase will be more likely to switch to another brand when the poor product performance is attributed to: i) a group's inaction versus an individual's inaction; or ii) an individual's action versus a group's action.

Next we turn to an empirical examination of our predictions. Across three studies, we varied our operationalization of the key constructs, such as culture (a cross-country design or cultural priming) and action/inaction (highlighting what is done vs. what is not done, deviation from the status quo, or having no choice) and tested our predictions.

Study 1

The objective of this study was to examine the impact of culture, agency, and the action/inaction frame on the extent to which respondents regretted their choices (hypotheses 1a and 1b) and displayed an intention to switch brands in the future (hypotheses 2a and 2b). To this end, we employed a 2 (Culture: China vs. Canada) \times 2 (frame: action vs. inaction) \times 2 (agency: individual vs. group) between-subjects design.

Participants and procedure

Student participants from Canada ($n = 221$) and China ($n = 114$) were randomly assigned to one of four conditions, with approximately equal numbers of participants in each condition. A service plan for cellphones was chosen as the product stimulus because of participant familiarity across nations. Participants were told that we were interested in how people make choices and were shown information about cellphone plans from two companies (P and Q). To ensure that no option was dominant, the stimulus was designed such that each company was superior on some aspects of the plan, but inferior on others. Since the study was conducted in two different countries, the stimulus (e.g., roaming charges, number of minutes provided) was also tailored to the local situation.

Participants in the individual agency condition were told to imagine that they were looking for a cellphone plan for themselves and were asked to make a choice between Companies P and Q after reading about their plans. Participants in the group agency condition were told to imagine that their family was looking for a family service plan, and all members of the family had sat down to discuss and choose a plan. To avoid concerns regarding the role of justifiability (Inman & Zeelenberg, 2002), it was emphasized that the decision was a group, and not an individual, decision. After the choice was made, participants were told to imagine that after using the phones, they found that the plan they (or the family) had chosen was adequate, but there were areas (e.g., coverage) in which the service could be better. Next, they encountered a *Consumer Reports* story about Companies P and Q and were told to read the report.

Thoughts of action or inaction were activated using framing in this study. Specifically, in the *Consumer Reports* story, those in the action condition saw a headline that read, "You chose Company P (or Q)?" while those in the inaction condition saw a headline that read, "You did not choose Company P (or Q)?" Beyond the headline, the text in the report described a study showing that the company they had not chosen was slightly better than the one they had chosen, but overall, there was no major difference between operators. After reading the report, participants were first asked to indicate the amount of regret felt and their intentions to switch to the other operator. The amount of regret felt was measured using a three-item scale ("I (We) regret choosing Company ___"; "I (We) feel sorry for our choice"; and "I (We) should not have chosen Company ___ earlier") ($\alpha = .90$) (Landman, 1993; Zeelenberg & Pieters, 2007)⁴. Next, participants were also told that, thanks to consumer protection regulations, they were allowed to switch to another operator if they so desired, without any penalty. Participants were next asked to indicate which operator they would choose (Company P or Q). In addition, brand-switching

⁴ Landman (1993) defined regret as "a more or less painful cognitive and emotional state of feeling sorry for misfortunes, limitations, losses, transgressions, shortcomings, or mistakes" (p. 36). Additionally, regret is viewed as a lost opportunity (Zeelenberg & Pieters, 2007) that has frequently been used as a proxy for counterfactual thinking and is viewed as an affective outcome of counterfactual thinking (Roese, Hur, & Pennington, 1999).

intention was also measured using a four-item scale (“Switching to a different company would be a good decision”; “It appears to be a good idea for us to subscribe to a service from another company”; “We should stick with the current service provider” (reverse-coded); and “Staying with the same company we have now is preferred” (reverse-coded) ($\alpha = .88$)). All items were measured on a 7-point scale with 7 = strongly agree. Lastly, participants completed questions on other individual difference measures.

Results

Pretest

In this study, choosing a product was used as a proxy for action, and not choosing a product was used as a proxy for inaction. To test if participants viewed choosing as an action and not choosing as an inaction, prior to conducting the study, a pretest was conducted ($n = 30$). One group of participants ($n = 15$) were told that a consumer had chosen Company P, whereas another group ($n = 15$) was told that a consumer had not chosen Company Q. A t-test indicated that participants who were told that Company P had been chosen were significantly more likely to perceive that the consumer had engaged in an action ($M = 6.34$), compared to those who were told that Company Q had not been chosen ($M = 4.52$, $F(1, 28) = 8.87$, $p < .05$). Thus, though both choosing and not choosing may require one to make a choice, the pretest showed that participants believed choosing feels more like taking an action, as compared to not choosing.

Felt regret

Participants were first asked to indicate the extent to which they regretted the initial decision. An ANOVA on the mean of the three items revealed a significant three-way interaction ($F(1, 327) = 23.37$, $p < .01$). Further analysis showed that the two-way interaction between frame and agency was significant within each country (Canada: $F(1, 328) = 9.32$, $p < .01$; China: $F(1, 327) = 14.15$, $p < .01$). Contrasts showed that the Canadian participants felt more intense regret when the headline highlighted individual inaction ($M = 3.96$) versus group inaction ($M = 3.35$; $F(1, 327) = 3.81$, $p = .052$), though the statistical significance of the result is marginal. On the other hand, they felt more intense regret when the headline highlighted group action ($M = 3.96$) versus individual action ($M = 3.44$; $F(1, 327) = 5.64$, $p < .05$). Thus, consistent with [hypothesis 1a](#), Westerners are found to experience greater regret when an undesired outcome is caused by an individual’s failure to act or a group’s action, compared to a group’s failure to act or an individual’s action. The opposite pattern of results was obtained for the Chinese participants. This group of participants felt more intense regret when the headline highlighted individual action ($M = 3.92$) versus group action ($M = 2.93$; $F(1, 327) = 7.62$, $p < .01$). Conversely, they felt more intense regret when the headline highlighted group inaction ($M = 3.64$) versus individual inaction ($M = 2.69$; $F(1, 327) = 6.57$, $p < .05$), consistent with [hypothesis 1b](#).

Brand-switching

An ANOVA on the mean of the four items used to measure switching intention also indicated a significant three-way interaction ($F(1, 327) = 21.04$, $p < .01$). Further analysis shows that the two-way interaction within each country was significant (Canada: $F(1, 327) = 6.14$, $p < .05$; China: $F(1, 327) = 14.94$, $p < .01$). Specifically, Canadian participants expressed greater switching intention when the choice was framed as individual inaction ($M = 4.35$) versus group inaction ($M = 3.98$), though the effect, while directionally consistent with our prediction, is not statistically significant ($F(1, 327) = 2.14$, $p = .15$). Conversely, when the choice was framed as an action, Canadian participants expressed significantly greater switching intention in the group ($M = 4.25$) versus individual condition ($M = 3.75$; $F(1, 327) = 4.22$, $p < .05$). We observed the opposite pattern of results for the Chinese participants. In the action condition, Chinese participants expressed significantly greater switching intention when the choice was framed as individual action ($M = 4.77$) versus group action ($M = 3.57$; $F(1, 327) = 10.27$, $p < .01$). Conversely, when the choice was framed as inaction, Chinese participants expressed greater switching intention in the group ($M = 4.43$) versus individual condition ($M = 3.62$; $F(1, 327) = 5.19$, $p < .05$), consistent with [hypotheses 2a and 2b](#).

Recall that participants were told that they could switch to another operator if they so desired, without any penalty. Therefore, following exposure to the *Consumer Reports* story, participants were asked to indicate which operator they would choose. A participant who chose Company P (Q) earlier and Company Q (P) at this stage would be deemed to have switched. When a logistic regression was performed on this binary variable (switching = 1 and staying = 0), as expected, we found a significant three-way interaction ($\beta = 5.16$, S.E. = 1.02, *Wald* (1) = 25.81, $p < .01$). Chi-squared tests were further conducted to examine how many people switched to the other operator in each condition. Specifically, for the Canadian sample, when the choice was framed as an action, more participants decided to switch to the alternative operator when the decision was made on a family ($n = 32$) versus individual ($n = 18$; χ^2 (1) = 4.26, $p < .05$) basis. However, when the decision was framed as inaction, more participants decided to switch to the alternative operator when the decision was made on an individual ($n = 43$) versus family ($n = 22$; χ^2 (1) = 8.75, $p < .01$) basis. For the Chinese sample, an opposite pattern was observed. When the choice was framed as an action, more participants decided to switch to the alternative operator when the decision was made on an individual ($n = 23$) versus family ($n = 10$; χ^2 (1) = 8.12, $p < .01$) basis. On the other hand, when the choice was framed as inaction, more participants decided to switch to the alternative operator when the decision was made on a family ($n = 20$) versus individual ($n = 13$; χ^2 (1) = 6.98, $p < .01$) basis. Thus, the results from both brand-switching intention and actual switching behavior support our predictions.

Mediation

To test if felt regret mediated switching intention, a moderated-mediation analysis was conducted ([Preacher & Hayes, 2008](#)).

Model number 4 was run on 5000 bootstrap samples. Analyses revealed a significant mediation with an indirect effect estimate of $-.83$ (boot S.E. = $.26$) and a 95% confidence interval of $-.114$ to $-.39$. Thus, the indirect effect through felt regret was significant. A mediation analysis was also conducted on actual switching behavior. Similarly, model number 4 was run on 5000 bootstrap samples. Analyses revealed with a 95% confidence interval of $.48$ to 1.96 that the indirect effect through felt regret was significant (estimate of indirect effect = 1.10 , boot S.E. = $.38$). Thus, the results provide evidence of the mediational role of regret.

Discussion

The findings from this study support our core contention that Easterners (Chinese consumers) and Westerners (Canadian consumers) react differently to unhappy product experiences depending on who made the original purchase decision. Westerners tend to experience greater regret when a group makes a poor decision, because individual and not group decision-making is the norm in the West. Similarly, Easterners tend to experience greater regret when the individual makes a poor decision, because group and not individual decision-making is the norm in the East. Also, in both instances, regret leads to a predictable increase in the tendency to switch brands in the future.

Study 2

Study 2 aims to address a number of concerns associated with Study 1. First, to control for the potential lack of equivalence in a cross-country design and to allow for the random assignment of participants to conditions, this study was conducted on a sample of bicultural Singaporean subjects. As has been argued elsewhere (Chen et al., 2005; Hong, Morris, Chiu, & Benet-Martinez, 2000), such a sample allows for the priming of one or another culture through the use of visual primes, which then colors subsequent psychological processes (Lee, Aaker, & Gardner, 2000; Menon et al., 1999). Consequently, it is possible to randomly assign participants to experimental conditions, thus eliminating concerns regarding confounds. Second, in Study 1, action/inaction was manipulated through the employment of a choice frame. Though our pretest showed that choosing is viewed more as an action than not choosing, it could be argued that both frames required participants to make a choice. Thus, in this study, we manipulated action/inaction in a slightly different manner. Action involved making a conscious decision to act, and inaction involved a conscious decision to not act. Third, in Study 1, participants were reminded that they “chose” or “did not choose” a product. A potential issue with this procedure is that the action frame involves making an incorrect choice, while the inaction frame involves not making a correct choice. This may unintentionally evoke different valences associated with good versus bad choices across conditions. Thus, in Study 2, we kept the valence constant by highlighting that participants had made a wrong decision across all conditions. Lastly, this study also aims to examine

a potential alternative explanation for the findings, that the perceived quality of the decision made in the group versus individual conditions differs across cultures⁵. As a result, additional dependent measures were included in the study. One hundred sixty nine participants were recruited from a large Singaporean university for this study. A 2 (culture prime: Chinese vs. U.S.) \times 2 (frame: action vs. inaction) \times 2 (agency: individual vs. group) between-subjects design was employed.

Method

Stimuli development for culture priming

To activate the participants' cultural orientations, we followed prior research (e.g., Chen et al., 2005; Hong et al., 2000) and used two different collages representing either the Chinese culture (e.g., the Great Wall, Confucius, a dragon) or the U.S. culture (e.g., the White House, the Statue of Liberty, a bald eagle). A pretest was conducted ($n = 159$) on Singaporean students randomly assigned to one of the two collage conditions. After viewing the collages, the participants were asked to list the name of the first politician that came to their minds. Activating a specific cultural orientation should increase the accessibility of related information; therefore, priming an individual's Eastern orientation ought to increase the accessibility of Eastern politicians, and vice-versa (Chen et al., 2005). For participants primed with the Chinese (vs. the U.S.) collage, Asian (vs. Western) politicians were more likely to be the first that came to mind ($\chi^2(1) = 21.95, p < .01$ $F(1, 134) = 17.79, p < .001$). Thus, the cultural prime successfully induced different cultural orientations among the participants and was used in subsequent studies.

Procedure and stimuli

Upon entering the lab, participants⁶ were first told that they would be required to complete a couple of unrelated studies and were then exposed to the cultural prime and then moved on to the next study. Here, participants were asked to imagine that they (or a team of which they were a part) had been investing in the stock market, and that they had subscribed to a service provided by a consulting firm. The consulting firm helped them make decisions by providing market analysis results or advice on when to buy or sell (although it was always the investors who made the final decisions). In the action condition, participants were told that following recent market updates from the firm, they (their team) acted and modified their stock-holdings. Subsequently, they found that they would have been better off if they (their team) had not changed their portfolio. In the inaction condition, participants were told that following

⁵ We are indebted to the Associate Editor for raising this plausible rival explanation.

⁶ In this study, a total of 172 students participated, but three participants were excluded from the data analysis due to substantial missing data. Since these participants answered less than 10% of the questions, they were automatically excluded from the analysis by SPSS, which treated these observations as missing data. Consequently, there was no difference in terms of statistical significance and degrees of freedom regardless of whether these observations were included or excluded from the statistical analysis.

recent market updates from the firm, they (their team) had opted not to act and to stay with their existing stockholdings. Subsequently, they found that they would have been better off if they had changed their portfolio⁷.

After reading the scenario, participants indicated the extent to which they would feel regretful about their decisions. Next, participants were exposed to an ad featuring another financial consulting firm, *FrontFin*. In the action-frame condition, the ad copy read, “You (Your team) acted? Not a good decision!” In the inaction-frame condition, the ad copy read, “You (Your team) did not act? Not a good decision!” (see Appendix A). After seeing the ad, participants indicated the extent to which they would choose *FrontFin* as their next investment firm; in addition, they responded to other manipulation check items and demographic questions.

Results

Manipulation checks

In this study, action was operationalized as making changes to the existing stock portfolio, while inaction was operationalized as keeping the existing stock portfolio as is. To check if our manipulation was successful, participants were asked to indicate the extent to which they felt that a person changing his stockholding was taking action, and a person staying with the current stockholding was not taking action (on a 7-point scale, with 1 = not taking action and 7 = taking action). t-Tests showed that participants believed changing one’s portfolio was a sign of taking action ($M = 5.53$, $t(168) = 21.64$, $p < .01$, compared to a midpoint of 4). On the other hand, the status quo was viewed as inaction ($M = 3.56$, $t(168) = -3.85$, $p < .01$). This finding validated our use of changing and not changing one’s portfolio as the operationalization of action and inaction, respectively.

Confounding checks

Our conceptualization is based on an assumption that norms about group and individual agency differ across cultures. However, it is also possible that the differential focus on groups and individuals may lead to different expectations regarding the quality and riskiness of group (versus individual) decisions across priming conditions. Thus, in this study, participants were asked to indicate their agreement with a list of six questions pertaining to decision quality (“In general, we make better decisions as a group than individually”; “I would trust the decisions made by a group than those made by myself”; “The risk that groups would make a bad decision is lower than that of an individual”; “It is safer to go with group decisions than my own decision”; “Decisions made by a group are not necessarily better than those made by individuals”; and “Individuals are more likely to make a mistake when making decisions, as compared to groups”; Cronbach’s $\alpha = .75$). A fully-saturated

ANOVA run on decision quality yielded no significant main or interaction effects (all $ps > .10$), thereby ruling out decision quality as a possible alternative explanation for our findings.

Regret

To measure regret, participants indicated the extent to which they felt their (the team’s) choice was regretful, they (the team) would feel sorry for their choice, and they (the team) should have been more cautious (7 = strongly agree; $\alpha = .76$). The ANOVA on the mean of the items showed a significant three-way interaction ($F(1, 161) = 23.21$, $p < .01$). Within each cultural prime condition, the two-way interaction was also significant (U.S. prime: $F(1, 161) = 9.10$, $p < .01$; Chinese prime: $F(1, 161) = 14.31$, $p < .01$). Contrasts showed that participants primed with the Western culture exhibited a significantly lower sense of regret when they, as individuals, acted to change their stock portfolio ($M = 4.25$) versus when the group acted ($M = 4.97$; $F(1, 161) = 6.54$, $p < .05$). On the other hand, they felt a greater sense of regret when they, as individuals, did not act to change their stock portfolio ($M = 4.77$), compared to when the group did not act ($M = 4.28$; $F(1, 161) = 2.93$, $p = .09$), albeit marginally. Conversely, in the Eastern prime condition, participants exhibited a significantly greater sense of regret when they, as individuals, changed their stock portfolio ($M = 4.95$), compared to when the team changed their stock portfolio ($M = 4.20$; $F(1, 161) = 6.63$, $p < .05$). However, they exhibited a significantly lower sense of regret when they, as individuals, did not change their stock portfolio ($M = 4.73$), as compared to when the team did not change their stock portfolio ($M = 4.39$; $F(1, 161) = 7.68$, $p < .01$).

Brand-switching

To measure brand-switching intentions, participants were asked to indicate whether they thought they (or their team) would switch to the company shown in the advertisement and use *Frontfin* (the firm in the ad) for their future investment needs ($r = .77$, $p < .01$). An ANOVA on the mean of the two items showed a significant three-way interaction ($F(1, 161) = 25.84$, $p < .01$). Further analyses showed that both the two-way interactions in the U.S. prime condition ($F(1, 161) = 9.51$, $p < .01$) and Chinese prime condition ($F(1, 161) = 16.71$, $p < .01$) were significant. Next, we proceeded to examine the contrasts within each prime condition. As in Study 1, contrasts showed that in the U.S. prime condition, individual action ($M = 4.30$) led to less switching intention than did group action ($M = 3.65$; $F(1, 161) = 5.92$, $p < .05$). On the other hand, individual inaction ($M = 4.30$) led to greater switching intention than did group inaction ($M = 3.70$; $F(1, 161) = 3.74$, $p = .055$), though the statistical significance of this result is marginal. In the Chinese prime condition, individual action ($M = 4.42$) led to higher brand-switching intentions than did group action ($M = 3.63$; $F(1, 161) = 6.34$, $p < .05$). Group inaction, however, led to higher brand-switching intentions ($M = 4.34$) than did individual inaction ($M = 3.27$; $F(1, 161) = 10.53$, $p < .01$).

⁷ This stimulus was adapted from Kahneman and Tversky (1982), who argued that someone who switched stocks had acted, while a person who did not switch was considered to have failed to act.

Mediation

To test whether regret mediated the impact of culture, frame, and agency on brand-switching intention, a moderated mediation analysis was conducted (Preacher & Hayes, 2008). Model number 4 was run on 5000 bootstrap samples. Results indicated that the indirect effect through regret was significant, with a 95% confidence interval of -1.35 to $-.05$ (estimate of indirect effect = $-.60$, boot S.E. = $.32$).

Discussion

The findings from this study address a number of concerns that were associated with Study 1. While manipulating action and inaction more directly and controlling for potential confounds (e.g., idiosyncratic country differences, differences in the valence of the decision across conditions), this study replicated the findings of Study 1. Easterners tend to experience greater regret following an unhappy product experience if the original brand selection was made by an individual, while Westerners tend to experience greater regret following an unhappy product experience if the original brand selection was made by the group. Enhanced feelings of regret increase brand switching intentions. The findings from this study also address the potential concern that differential expectations concerning the quality of group versus individual decisions could be an alternative explanation for our findings. Third, this study operationalized action and inaction, based on the notion that keeping the status quo is equivalent to not taking action and deviating from the current status quo is equivalent to taking action (Kahneman & Tversky, 1982). Yet, it might be argued that not choosing an option may itself be a choice. We therefore conducted another study in which we operationalized inaction (non-choice) by simply eliminating the availability of choice, as discussed next.

Study 3

In Studies 1 and 2, not choosing a product or maintaining the status quo was used as an operationalization of inaction. However, as noted above, one might argue that not choosing a product or choosing to maintain the status quo may also be viewed as an implicit form of action, as one is still making a choice to not choose. Therefore, we employ another approach, based on the notion that when an individual has no choice and therefore makes no decision, that individual has indeed been inactive. Thus in Study 3, inaction was operationalized as having no choice, whereas action was operationalized as actively making a decision.

Method

Participants

A total of 144 students were recruited from a large Singaporean university for this study. A 2 (culture prime: Western vs. Eastern) \times 2 (frame: action vs. inaction) \times 2 (agency: individual vs. group) between-subjects design was employed.

Procedure and stimuli

Procedures for this study were similar to those employed in Study 2. After exposure and responding to the culture prime, participants were asked to read a car rental scenario. In the scenario, participants read about Pat, deliberately identified with an androgynous name to eliminate gender effects (and a group of friends), who had booked a rental car for a trip. Upon arriving at the rental company to pick up the car, in the action condition, Pat (and a group of friends) was (were) told by the rental company representative that there were a number of different options of cars from which to choose. With that information on hand, Pat (the group) proceeded to choose one of the options. In contrast, in the inaction condition, Pat (the group) was (were) told that there was only one brand and model of car left, and Pat (they) had no other choice. After using the car for two days, Pat (the group) was (were) not happy with the car. After reading the scenario, participants were asked to indicate the extent to which they thought Pat (the group) would regret the choice of car (action condition) or regret having accepted the car assigned by the rental company (inaction condition), and the extent to which they thought Pat (the group) would switch to a different rental company in the future. They also completed several manipulation and confounding check questions before being debriefed.

Results

Manipulation and confounding checks

In this study, action was operationalized as choosing a car, while inaction was operationalized as passively accepting the car assigned by the company. To test the validity of our operationalization, participants indicated the extent to which they agreed (on a 1–7 scale, with 7 = strongly agree) that “choosing a product of one’s choice” was “indicative of taking action” and “passively accepting what is given to us by companies” was “indicative of inaction.” t-Tests confirmed that our manipulation was successful, in that, compared to the neutral value of 4, participants felt that choosing was a sign of action ($M = 5.56$; $t(143) = 13.41$, $p < .01$), whereas passively accepting the product assigned by the company was a sign of inaction ($M = 4.68$; $t(143) = 5.06$, $p < .01$).

In addition, to check whether the culture prime was successful, we asked participants to list the first politician that came to their mind and examined whether an Eastern (or Western) politician was more accessible. The responses were coded as 0 or 1 for an Eastern (or Western) politician, respectively. A chi-square analysis showed that in the Chinese-primed condition, participants were more likely to retrieve an Eastern politician ($n = 52$), compared to those in the U.S.-primed condition ($n = 33$) ($\chi^2(1) = 4.95$, $p < .05$). Thus, our culture manipulation was successful.

Lastly, participants’ ratings of the quality and riskiness of group versus individual decisions were also examined, using the same scale as employed in Study 2. As in Study 2, there was no significant difference in participants’ ratings of the quality of group versus individual decisions across conditions (all $ps > .1$).

Regret

Participants were asked to indicate how much Pat (or the group of friends) would regret his/her (or their) choice of car in the action condition. In the inaction condition, they were asked to indicate the extent to which they felt that Pat (or the group of friends) would regret accepting the car assigned to them. Since Studies 1 and 2 showed that the inter-item correlation among the items we used to measure regret was very high, we employed a single-item scale. For constructs with concrete singular objects, a one-item question is as valid as a multi-item scale (Bergkvist & Rossiter, 2007).

An ANOVA with culture, frame, and agency as between-subjects factors showed a significant three-way interaction ($F(1, 136) = 14.81, p < .01$). Further analyses revealed that the two-way interaction within each culture prime condition was significant (U.S. prime: $F(1, 136) = 7.53, p < .01$; Chinese prime: $F(1, 136) = 7.31, p < .01$). Next, we proceeded to examine the contrasts within each prime condition and found that in the U.S. prime condition, individual action ($M = 4.39$) led to lower expectations of regret than did group action ($M = 5.62; F(1, 136) = 7.38, p < .01$). We did not observe a significant difference between individual versus group inaction ($M = 5.09$ vs. $4.64; F(1, 136) = 1.12, p = .29$), although this result was directionally consistent with our thesis. In the Chinese prime condition, individual action ($M = 5.19$) led to stronger expectations of regret than did group action ($M = 4.33; F(1, 136) = 4.56, p < .05$), whereas individual inaction led to marginally lower expectations of regret ($M = 4.44$) than did group inaction ($M = 5.16; F(1, 136) = 3.06, p = .08$).

Brand-switching

Next, we proceeded to examine whether participants felt that Pat (the group) would switch to a different rental company. Participants were asked to indicate the extent to which they believed “Pat (the group) would still continue to rent from this rental company (reverse coded)” and “Pat (the group) would switch to a different rental company” ($r = .61, p < .01$). An ANOVA on the mean of the two items revealed a significant three-way interaction ($F(1, 136) = 23.79, p < .01$). Further analyses showed that the respective two-way interaction within each cultural prime condition was also significant (U.S. prime: $F(1, 136) = 9.94, p < .01$; Chinese prime: $F(1, 136) = 14.25, p < .01$). Planned contrasts showed that in the U.S. prime condition, there was no significant difference between individual action ($M = 2.94$) and group action for expectations of brand-switching ($M = 3.62; F(1, 136) = 2.68, p = .10$), though it was directionally consistent with our prediction. Conversely, individual inaction ($M = 3.64$) led to higher expectations of brand-switching than did group inaction ($M = 2.54; F(1, 136) = 8.18, p < .01$). In the Chinese prime condition, individual action ($M = 3.60$) led to marginally higher expectations of brand-switching than did group action ($M = 2.92; F(1, 136) = 3.48, p = .06$). Group inaction, however, led to higher expectations of brand-switching ($M = 3.95$) than did individual inaction ($M = 2.67; F(1, 136) = 11.97, p < .01$). This pattern of results parallels that obtained in the earlier studies.

Mediation

To test whether regret mediates the impact of culture, frame, and agency on brand-switching intention, a moderated-mediation analysis was conducted (Preacher & Hayes, 2008). As in the earlier studies, model 4 was run on 5000 bootstrapping samples. Analyses indicated that the indirect effect through regret was significant, with a 95% confidence interval of -1.22 to $-.071$ (estimate of indirect effect = $-.52$, boot S.E. = $.29$).

Normativeness of individual and group agency

To test our assumption that a Western orientation evokes the normative expectation that individuals should act, while an Eastern orientation evokes the normative expectation that groups should act, we turned to a seminal paper on culturally different agency perceptions (Menon et al., 1999). In the paper, the authors used questions such as, “In my society, individuals [organizations] take control of the situations around them and exercise free will”; “The rules and laws in my society say that individuals [organizations] should take control of the situations around them and exercise free will”; and, “Individuals [organizations] set a course for themselves independent of the influences surrounding them.” These scales were summated into an individual action scale and collective action scale. For the purpose of this study, we wanted to measure the relative norms between individual and group agency. Thus, we adapted two of these items, but made them comparative (instead of having two different scales). Specifically, we asked participants to respond to the following items: “In my society, ____ will take control of the situations around them and exercise free will” and “The rules and laws in my society say that ____ should take control of the situations around them and exercise free will” on a 1–7 scale, with 1 = individuals and 7 = organizations ($r = .61, p < .05$). T-tests on the mean of these two items showed a significant main effect of culture on normative expectations ($t(142) = 2.99, p < .01$). Specifically, participants in the Chinese prime condition were more likely to feel that organizations should take control of the situation and act ($M = 4.31$), compared to those in the U.S. prime condition ($M = 3.65$).

To show further support that it is this normative difference that leads to the variation in brand-switching behavior, we replaced culture as a factor with this normative belief scale and reran the analyses on brand-switching intention reported above. A regression analysis with normative belief, action/inaction, and individual/group as between-subjects variables was run (because the normative belief scale was a continuous variable). A significant three-way interaction emerged ($\beta = .69, S.E. = .30, CI: .10$ to 1.29), and the pattern of results mirrored the pattern obtained using culture as a between-subjects factor. Taken together, these results provide further support to our conceptual argument that cultural differences are driven by variations in normative expectations.

Discussion

The results from this study were conceptually identical to those from Studies 1 and 2. Westerners tend to experience

greater regret when a group makes a poor decision, while Easterners tend to experience greater regret when the individual makes a poor decision, because such decision-making is a violation of the cultural norm that prevails in the respective cultures. Further, regret leads to a predictable increase in the tendency to switch brands in the future. In addition, the findings from this study add to the results obtained in the earlier studies by using a different operationalization of action and inaction. In particular, by operationalizing inaction as simple passivity (i.e., making no choice), this study provides results that are consistent with the notion of inaction when that inaction might reflect passivity. Importantly, the absence of choice (in the inaction condition) did not yield statistically significantly higher regret than when the focal individual could exercise choice (in the action condition) thus alleviating concerns that a confound (munificence versus scarcity) could account for our results ($M_{\text{action}} = 4.88$, $M_{\text{inaction}} = 4.83$, $F(1, 136) = .05$, $p = .82$).

General discussion

Summary

Drawing from the literature on implicit theories of agency, we predicted differences in regret-mediated brand-switching due to cultural differences in the expectations of group versus individual action and inaction. Our evidence indicates that Westerners are more likely to feel regretful when they could have prevented product failure by having done something. This type of thinking results in the willingness to switch brands when Westerners believe they could have mutated the causal chain by having engaged in an action, as an individual. Conversely, Easterners are more likely to feel regretful when their group could have prevented product failure by having done something, leading to an enhanced willingness to switch brands. Overall, felt regret affected consumers' brand-switching intentions and behavior.

Theoretical contributions

First, our demonstration of a reversal in feelings of regret and subsequent behavior when the group (versus the individual) is "agentic" is an important theoretical advance. Specifically, our findings show that failure due to inaction is not necessarily a mirror image of failure due to action. Second, the current research further advances our understanding of the manner in which attribution occurs. As several themes in the literature, such as the fundamental attribution error (Nisbett & Ross, 1980) and the correspondence bias (Gilbert & Malone, 1995) indicate, the research on attribution has focused on whether lay people trace outcomes to either dispositions or contexts (e.g., Chiu et al., 2000; Choi, Nisbett, & Norenzayan, 1999). However, what the current research suggests is that causal attribution and subsequent emotional and behavioral responses are separate entities. For example, even though Westerners will be more likely to attribute an outcome to individual actors versus a group, they will not perceive the outcome as requiring future correction when a

negative outcome occurs due to an individual's action. Similarly, Easterners, who are known to chronically attribute outcomes to the group (vs. an individual), will experience less regret when an unsatisfactory outcome occurs due to an inappropriate action taken by the group (versus an individual). Therefore, the current research shows that the end-state of attribution processes is not merely determined by the attribution process itself, but rather by the agent to whom the action or inaction is attributed.

Managerial contributions

Our research has implications for both brand management and advertising persuasion strategies. In bicultural settings (such as Singapore and India), firms would do well to consider the possibility that subtle message frames might yield brand loyalty or switching. Given the behavioral consequences of felt regret, an induction of regret can activate a change in the mode of behavior, such as brand-switching. Also, as indicated by much research (Kim, Rao, & Lee, 2009; Labroo, Dhar, & Schwarz, 2008; Labroo & Lee, 2006; Reber, Schwarz, & Winkielman, 2004), persuasion can be enhanced by considering consumers' mental representational states. For instance, the focal firm might be able to limit consumer switching following an unhappy experience, by emphasizing individual action or group inaction (in a Western setting) or by emphasizing individual inaction or group action (in an Eastern setting) in their persuasive communications, since such an emphasis is likely to elicit relatively less regret. By the same token, when consumers have an unhappy experience with a competing brand, the focal firm may be able to induce consumer switching by emphasizing individual inaction or group action (in a Western setting) or by emphasizing individual action or group inaction (in an Eastern setting) in their persuasive communications, since such an emphasis is likely to elicit relatively greater regret. Therefore, by appropriately accounting for elements that likely affect consumer regret and brand-switching, firms might enhance or limit brand-switching following an unsatisfactory consumption experience, an issue of considerable interest to firms addressing culturally diverse markets, both domestically and internationally.

Limitations and future research

While many of the standard limitations, such as the use of student participants and scenario-based studies are readily acknowledged, these concerns are not debilitating issues to the research we describe. Nevertheless, some important conceptual issues would benefit from further scholarly scrutiny. First, the role of counterfactual thinking is not clearly envisioned in the current research. Since counterfactual thinking represents a cognitive process that consumers undergo after experiencing outcomes that could have been better, the link between such cognitive processes and brand-switching can further shed light on the key premise of the current research. Second, the notion of the "self" may differ from culture to culture. Cognitive neuroscience-based investigations indicate

that Western participants show enhanced activation in the medial prefrontal cortex (MPFC) when thinking about themselves, whereas Chinese participants display heightened activation of MPFC when reflecting on both themselves and their mothers (Zhu, Zhang, Fan, & Han, 2007). Thus, the notion of what constitutes an individual may differ in independent versus interdependent cultures, complicating the definition of

“individual” versus “group” with attendant implications for the conception of agency. Finally, we observe that individuals in the East react to non-normative behavior (group inaction) with non-normative behavior (individual action); clearly, future research needs to parse the circumstances under which Eastern individuals might, in fact, tend to violate a norm that has yielded an unsatisfactory outcome.

Appendix A. Stimuli for Study 2

<p>You acted ? Not a good decision !</p>  <p>If you are like most investors, there are frequently times when you are unsure if you should act. Should I buy the stock? Making a wrong decision will lead to regret.</p> <p>We, at FrontFin, have been helping to guide over 5,000 people to financial peace.</p> <p>If you'd like to know more, call us at 1800-6468-2352 or visit www.frontfin.com</p> 	<p>You did not act ? Not a good decision !</p>  <p>If you are like most investors, there are frequently times when you are unsure if you should refrain from acting. Should I stay with my current portfolio? Making a wrong decision will lead to regret.</p> <p>We, at FrontFin, have been helping to guide over 5,000 people to financial peace.</p> <p>If you'd like to know more, call us at 1800-6468-2352 or visit www.frontfin.com</p> 
<p>Your team acted ? Not a good decision !</p>  <p>If your team is like most investors, there are frequently times when you are unsure if you should act. Should we buy the stock? Making a wrong decision will lead to regret.</p> <p>We, at FrontFin, have been helping to guide over 5,000 people to financial peace.</p> <p>If you'd like to know more, call us at 1800-6468-2352 or visit www.frontfin.com</p> 	<p>Your team did not act ? Not a good decision !</p>  <p>If your investment team is like most investors, there are frequently times when you are unsure if you should refrain from acting. Should we stay with our current portfolio? Making a wrong decision will lead to regret.</p> <p>We, at FrontFin, have been helping to guide over 5,000 investment teams to financial peace.</p> <p>If you'd like to know more, call us at 1800-6468-2352 or visit www.frontfin.com</p> 

Appendix B. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.jcps.2014.07.003>.

References

- Bergkvist, L., & Rossiter, J. R. (2007). The predictive validity of multiple-item versus single-item measures of the same constructs. *Journal of Marketing Research*, 44, 175–184.
- Bratman, M. E. (1991). *Planning and the stability of intention*. Stanford, CA: Center for the Study of Language and Information.
- Chen, H., Ng, S. L., & Rao, A. R. (2005). Cultural differences in consumer impatience. *Journal of Marketing Research*, 42, 291–301.
- Chiu, C. -y., Hong, Y. -Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, 73, 19–30.
- Chiu, C. -Y., Morris, M. W., Hong, Y. -Y., & Menon, T. (2000). Motivated cultural cognition: The impact of implicit cultural theories on dispositional attribution varies as a function of need for closure. *Journal of Personality and Social Psychology*, 78, 247–259.
- Choi, I., Nisbett, R. E., & Norenzayan, A. (1999). Causal attribution across cultures: Variation and universality. *Psychological Bulletin*, 125, 47–63.
- Fiske, A. P., Kitayama, S., Markus, H. R., & Nisbett, R. E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, S. T. Fiske, & S. Lindsey (Eds.), *The handbook of social psychology* (pp. 915–981). New York: McGraw-Hill.
- Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117, 21–38.
- Hattiangadi, N., Medvec, V. H., & Gilovich, T. (1995). Failing to act: Regrets of terman's geniuses. *International Journal of Human Development*, 40, 175–185.
- Hetts, J. J., Boninger, D. S., Armor, D. A., Gleicher, F., & Nathanson, A. (2000). The influence of anticipated counterfactual regret on behavior. *Psychology and Marketing*, 17, 345–368.

- Hong, Y. -y, Morris, M. W., Chiu, C. -y, & Benet-Martinez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist*, 55, 709–720.
- Inman, J. J., & Zeelenberg, M. (2002). Regret in repeat purchase versus switching decisions: The attenuating role of decision justifiability. *Journal of Consumer Research*, 29, 116–128.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review*, 93, 136–153.
- Kahneman, D., & Tversky, A. (1982). The simulation heuristic. In D. Kahneman, A. Tversky, & P. Slovic (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 201–208). Cambridge: Cambridge University Press.
- Kashima, Y., Kashima, E., Chiu, C. -Y., Farsides, T., Gelfand, M., Hong, Y. -Y., et al. (2005). Culture, essentialism, and agency: Are individuals universally believed to be more real entities than groups? *European Journal of Social Psychology*, 35, 147–169.
- Kashima, Y., Kashima, E., Farsides, T., Kim, U., Strack, F., Werth, L., et al. (2004). Culture and context-sensitive self: The amount and meaning of context-sensitivity of phenomenal self differ across cultures. *Self and Identity*, 3, 125–141.
- Kashima, Y., Siegal, K., Tanaka, K., & Kashima, E. S. (1992). Do people believe behaviours are consistent with attitudes? Towards a cultural psychology of attribution processes. *British Journal of Social Psychology*, 31, 111–124.
- Kim, H., Rao, A. R., & Lee, A. Y. (2009). It's time to vote: The effect of matching message orientation and temporal frame on political persuasion. *Journal of Consumer Research*, 35, 877–889.
- Kinnier, R. T., & Metha, A. T. (1989). Regrets and priorities at three stages of life. *Counseling & Values*, 33, 182–193.
- Krishnamurthy, P., & Sivaraman, A. (2002). Counterfactual thinking and advertising responses. *Journal of Consumer Research*, 28, 650–658.
- Labroo, A. A., Dhar, R., & Schwarz, N. (2008). Of frog wines and frowning watches: Semantic priming, perceptual fluency, and brand evaluation. *Journal of Consumer Research*, 34, 819–831.
- Labroo, A. A., & Lee, A. Y. (2006). Between two brands: A goal fluency account of brand evaluation. *Journal of Marketing Research*, 43, 374–385.
- Landman, J. (1987). Regret and elation following action and inaction. *Personality and Social Psychology Bulletin*, 13, 524–536.
- Landman, J. (1993). *Regret: Persistence of the possible*. New York: Oxford University Press.
- Lee, A. Y., Aaker, J. L., & Gardner, W. L. (2000). The pleasures and pains of distinct self-construals: The role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, 78, 1122–1134.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- Menon, T., Morris, M. W., Chiu, C. -y, & Hong, Y. -y (1999). Culture and the construal of agency: Attribution to individual versus group dispositions. *Journal of Personality and Social Psychology*, 76, 701–717.
- Miller, D. T., & McFarland, C. (1986). Counterfactual thinking and victim compensation: A test of norm theory. *Personality and Social Psychology Bulletin*, 12, 513–519.
- Morris, M. W., Menon, T., & Ames, D. R. (2001). Culturally conferred conceptions of agency: A key to social perception of persons, groups, and other actors. *Personality and Social Psychology Review*, 5, 169–182.
- Nisbett, R. E., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgement*. Englewood Cliffs, NJ: Prentice Hall.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891.
- Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*, 8, 364–382.
- Roese, N. J. (1994). The functional basis of counterfactual thinking. *Journal of Personality and Social Psychology*, 66, 805–818.
- Roese, N. J., Hur, T., & Pennington, G. L. (1999). Counterfactual thinking and regulatory focus: Implications for action versus inaction and sufficiency versus necessity. *Journal of Personality and Social Psychology*, 77, 1109–1120.
- Roese, N. J., & Olson, J. M. (1995). Counterfactual thinking: A critical overview. In N. J. Roese, & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 1–55). Mahwah, NJ: Lawrence Erlbaum Associates.
- Roese, N. J., Sanna, L. J., & Galinsky, A. D. (2005). The mechanics of imagination: Automaticity and control in counterfactual thinking. In R. R. Hassin, J. S. Uleman, & J. A. Bargh (Eds.), *The new unconscious* (pp. 138–170). New York: Oxford University Press.
- Spencer-Rodgers, J., Williams, M. J., Hamilton, D. L., Peng, K., & Wang, L. (2007). Culture and group perception: Dispositional and stereotypic inferences about novel and national groups. *Journal of Personality and Social Psychology*, 93, 525–543.
- Taylor, C. (1985). *Human agency and language*. Cambridge, England: Cambridge University Press.
- Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology*, 17, 3–18.
- Zhu, Y., Zhang, L., Fan, J., & Han, S. (2007). Neural basis of cultural influence on self-representation. *NeuroImage*, 34, 1310–1316.