Hesitant to label, yet quick to judge: How cultural mindsets affect the accessibility of stereotypic knowledge of a primed social category

Geetanjali Saluja

University of Technology Sydney

Rashmi Adaval

Hong Kong University of Science and Technology

Robert S. Wyer, Jr.

Chinese University of Hong Kong

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Author note

Geetanjali Saluja, Marketing Discipline Group, University of Technology Sydney.

Rashmi Adaval, Department of Marketing, Hong Kong University of Science & Technology.

Robert S. Wyer, Jr., Department of Marketing, Chinese University of Hong Kong.

Address correspondence to Geetanjali Saluja, Marketing Discipline Group, University of Technology Sydney, PO Box 123, Broadway NSW 2007, Australia, e-mail: Geetanjali.Saluja@uts.edu.au

Hesitant to label, yet quick to judge: How cultural mindsets affect the accessibility of stereotypic knowledge of a primed social category

Numerous newspaper articles have highlighted the economic implications of an aging workforce for different countries around the world. In China, where nearly 10% of the population is over the age of 65, this will pose challenges both socially and economically in the years to come. When other economies (e.g., the United States) have faced problems caused by an aging workforce, they have encouraged people to retire later and to continue working. However, despite these changes, perceptions of the elderly in the workplace have not always been positive suggesting that even if they continue to work reactions to them within an organizational setting might not be that favorable.

Much of the evidence that bears on how the elderly are perceived comes from research on social stereotyping. Brewer and Lui (1989) suggest that age-based social categorizations are quick and often automatic. Once the person has been categorized, stereotype- related knowledge is spontaneously activated. However, the stereotypes that people hold about the elderly are not consistent. Several sub-groups of elderly people have been identified (e.g., a grandparent, recluse, shrew/curmudgeon, etc.), each of which can possess either positive or negative traits or in some cases a mix of the two (Brewer, Dull & Lui, 1981; Schmidt & Boland, 1986; Hummert, Garstka, Shaner & Strahm, 1994). Perceptions of the elderly in the workplace are particularly relevant to the concerns of this article. Cuddy and Fiske (2002; Cuddy, Norton & Fiske, 2005) suggest that in this context, the elderly are perceived to be low in competence and high in warmth. Interestingly, in their studies, attempts to change people's perceptions of the competence of elderly workers had no effect, whereas perceptions of warmth were relatively malleable (Cuddy et al., 2005). Thus, when elderly persons were seen as less competent, they were described as warmer. However, judgments of competence did not change even when the elderly performed well. The

observation that perceptions of competence remain low and stable whereas perceptions of warmth are adjusted accordingly suggests that in the workplace, the elderly are likely to be disparaged independently of their job performance (Finkelstein, Burke & Raju, 1995).

Although the impact of stereotypes is pervasive, little research has examined individual or cultural differences in the *use* of stereotypic knowledge (traits or behaviors). The amount and type of knowledge that people acquire about a social category undoubtedly depends on their exposure to category members and the role of these members in their society. Consequently, a social category is likely to be perceived differently across cultures (Arnhoff, Leon, & Lorge, 1964; Lockenhoff et al., 2009; Giles et al., 2000; Chan et al., 2012). For example, attitudes towards the elderly are likely to be particularly favorable and respectful in Asian cultures. Thus, people acquire different subsets of concepts and knowledge about a category that are specific to the culture with which they identify and the activation of these concepts in any given situation might affect their reactions to a member of the category. However, cultural differences could exist not only in the content of a stereotype (e.g., the traits and prototypic behaviors) but also in the processing of this content (i.e., what aspect of stereotypic knowledge people draw upon – i.e., do they retrieve traits or behaviors).

Separating the effects of stereotype content from the effects of processing is inherently difficult. For example, if people differ in their views of the elderly across cultures, any differences in judgments could easily be attributed either to differences in the knowledge they have available about the elderly or to the type of information they draw upon. In the present research, we drew upon Oyserman's (2011; Oyserman, Sorensen, Reber & Chen, 2009) observation that individuals within a culture can acquire different processing strategies, or *cultural mindsets* that can be applied to new situations when situational factors activate these mindsets. We examined how activating different culture-related mindsets leads individuals to access and use different subsets of stereotype related knowledge (especially,

traits vs. behaviors) in processing information about the elderly and the consequent effects of this difference on judgments. The manipulation of mindset within a culture allowed us to minimize the effects of content differences in stereotype knowledge on judgments and allowed us to uncover the effects of using different types of features of the stereotype.

Stereotype content and structure

Early conceptualizations assumed that the use of stereotypes had motivational roots (Bettelheim & Janowitz, 1950; Brown, 1965; Christie, 1991; Blanchard, Lilly & Vaughn, 1991; Fiske & Von Hendy, 1992). However, more recent theories (Bodenhausen, Kang & Peery, 2012; Bodenhausen & Richeson, 2010; Hamilton & Sherman, 1994; Lambert & Wyer, 1990; Sherman, Sherman, Percy & Soderberg, 2013) have focused on the cognitive processes that underlie their application. According to these conceptions, a stereotype is typically represented in memory by a central concept denoting its referent along with trait concepts that are associated with it. When a member of the stereotyped group is encountered, this representation is activated and used as a heuristic basis for inferring the attributes of the individual. Devine (1989), for instance, found that subliminally exposing participants to the category "African American" led them to judge a target person in stereotype-related terms (e.g., as "hostile"). She speculated that people learn stereotypic features in the course of early childhood socialization and that these features, once learned, can spring to mind unintentionally when an exemplar of the stereotype is encountered.

Research on stereotyping typically assumes that these representations are composed of *traits.* Thus, people who are exposed to a member of a stereotyped group typically extract trait information and use it as a basis for making judgments (Bargh, 1997; Devine, 1989). The extent to which trait-based stereotypes are used might vary across groups of individuals (Lambert et al. 2003; Lepore & Brown, 1997; see also Locke et al., 1994; Wittenbrink et al.,

1997). However, the dominant assumption in the stereotyping literature has been that if trait-based information is available, it will be used.

Our work, however, assumes that the features of a stereotype can consist of not only traits, which presumably characterize a person in general, but also behaviors that are situation or context specific (Macrae & Bodenhausen, 2000; Macrae, Bodenhausen & Milne, 1995). When the category is activated, a subset of features associated with it might be retrieved (Macrae, Milne & Bodenhausen, 1994a). This subset could comprise trait information, behaviors, descriptive concepts etc. Thus, a stereotype may be represented in memory as an associative network consisting of a central concept denoting the stereotyped group or category along with a set of features that have become associatively linked to the concept through learning (see Srull & Wyer, 1989, for a more formal conceptualization of this). When people encounter a person or group that exemplifies the central concept of such a representation, the representation is activated and its features are used as a basis for judgment. We further raise the possibility that people differ in the *type* of stereotypic knowledge that they access when they encounter a member of a stereotyped group. That is, they might use *either* traits *or* behaviors depending on the cultural mindset that is primed.

In accounting for this possibility, we make two assumptions. First, we assume that the features of a stereotype can consist of not only traits, which presumably characterize a person in general, but also behaviors that are situation or context specific. Second, these traits and behaviors can vary in their accessibility, depending on both the frequency with which they have been applied to group members in the past and the information processing strategies that are salient at the point of judgment. Consequently, the type of stereotype-based knowledge that is activated upon exposure to a stereotyped group or individual can vary for reasons we elaborate presently.

In the next section, we first discuss cultural differences in the disposition to process information and examine how this might play a role in the type of knowledge that is brought to bear on judgments and behavior. We then apply this to understand how stereotypes of the elderly might be operated on and how traits and behaviors that are likely to compose these stereotypes are used.

Cultural differences in the disposition to process information

Of the many differences between societies that have been identified (Hofstede, 1980; Schwartz, 2009), the most extensively investigated has been that of individualism and collectivism (Hofstede, 1980; Triandis, 1995). *Individualism* is characterized by a disposition to think of oneself independently of others, whereas *collectivism* is characterized by a tendency to think of oneself as part of a group or collective. This difference, which is similar to the difference between independent and interdependent self-construals (Markus & Kitayama, 1991), is particularly likely to distinguish Western and East Asian cultures, respectively. Such a difference in self-perceptions, which is socially learned, could give rise to a more general difference in the disposition to think of both one's own and others' behaviors as either situationally independent or in relation to the social context in which they occur (Chiu & Hong, 2007; Markus & Kitayama, 1991; Triandis, 1995).

More recently, Oyserman (2011; Oyserman & Sorensen, 2009) and her colleagues have suggested that culture should be thought of as a multi-dimensional construct that arises out of attempts to socialize individuals for the performance of various tasks. This leads individuals to acquire a variety of overlapping and contradictory processes and procedures that can be cued by features of the situation at hand. Thus, people are socialized to be unique and independent in some contexts (e.g., to foster innovation) but also to be interconnected in other contexts (e.g., to foster family and group relations). Consequently, each individual has the ability to act in ways that seem not only independent but also interdependent. Situational

cues that make people think of themselves as independent or separate from the group can activate an *individualist mindset* whereas thinking of oneself as part of a group or interdependent might activate a *collectivist mindset*. These mindsets, once activated, can induce a general disposition to process information in a particular way and can influence judgments and behavior in much the same way that activating individuals' cultural identity influences them (Kuhnen & Oyserman, 2002; Oyserman, Coon, & Kemmelmeier, 2002; see also Chiu & Hong, 2007). Oyserman, Sorensen, Reber, & Chen, 2009), for instance, showed that the activation of an individualist mindset facilitated participants' tendency to pull out or separate things from the context whereas a collectivist mindset disposed them to think contextually and to make connections between objects. These information processing tendencies generalized to unrelated situations in which the tasks that participants performed were self-related (e.g., preferences for products; Mourey, Oyserman, & Yoon 2013) or not (e.g., evaluation of the fit between the endorser of the ad and its content; Kwon, Saluja, & Adaval, 2015).

Oyserman et al., (2009) further suggest that individualist or collectivist mindsets can be activated within a given culture (see also, Bond, 1983; Briley, Morris, & Simonson, 2005; Hong, Chiu, & Kung, 1997; Hong, Morris, Chiu & Benet-Martinez, 2000; Krauss & Chiu, 1998; Sui, Zhu, & Chiu, 2007 for similar conceptualizations). Once this disposition has been activated, it can influence the general information processing strategy that is applied in a different situation. For example, inducing people to use first-person singular pronouns (I, my, me, etc.) can activate an individualist mindset that leads them to separate information from its context, whereas inducing them to use first-person plural pronouns can activate a collectivist mindset that increases their sensitivity to the relations among pieces of information (Oyserman et al, 2009).

These differences have implications for the type of stereotype-related knowledge that people access and use. That is, the activation of different cultural mindsets is likely to influence the information processing strategies that people apply and the type of stereotype-related knowledge that they bring to bear on judgments. That is, they could affect the relative likelihood of retrieving traits and behaviors from a stereotype that has been activated. People with an individualist mindset who are exposed to an elderly person, for example, might be more likely to retrieve general trait concepts ("slow," "helpless," etc.) to use in describing the person because of their tendency to extract or pull out abstract information. However, they might be less likely to retrieve contextual behavior descriptions (e.g., "walks slowly on the sidewalk" or "needs assistance when boarding a bus"). In contrast, if people with a collectivist mindset are exposed to an elderly person, they may be more inclined to see things in context and to connect the behavior they are seeing with features of the situational context in which it occurs. They are therefore more likely to extract and use concrete, contextualized behaviors from the stored representation rather than an abstraction that is derived from the same information. Thus, for example, although both groups might infer that an elderly person is "slow," this inference might be based on different aspects of stereotypic knowledge.

The processes activated by different cultural mindsets may only be evident, however, when a stereotype containing both traits and behaviors exists and is accessible in memory at the time. A stereotype of the elderly, for example, is likely to contain both traits ("slow," "forgetful," etc.) and prototypic behaviors ("walks slowly") as a result of real or imagined encounters with persons who exemplify it. Many social categories, however, may not activate a clear stereotype. The representation of a bank teller, for example, might contain descriptions of job-related behaviors but might be otherwise nondescript. To this extent, differences in the disposition to extract traits or behaviors from the representation might have little effect on reactions to the category member.

Alternative conceptualizations should be noted. For example, people might form two different representations of a stereotyped category as a result of their past experiences with category members. One representation might consist primarily of traits and the other might consist primarily of context-specific behaviors. Activating an individualist mindset might dispose people to retrieve the trait-based representation whereas activating a collectivist mindset might dispose them to access the behavioral representation. Although the construction of these dual representations is conceivable, however, it seems somewhat implausible to assume that people segregate traits and trait-related behaviors into different representations of the same social category. It seems more likely that both traits and behaviors are contained in a *single* representation but are acted upon differently, depending on the mindset that is dominant at the time.

In the research to be reported, we examined the effect of activating a stereotype of the elderly. This stereotype was likely to be characterized by both traits and behaviors that are associated with doing things slowly. Therefore, its use was particularly relevant in the workplace where judgments of competence are important. Taken out of context, slowness could reflect either competence (carefulness, deliberation) or incompetence due to physical or mental deterioration. We therefore expected that the effects we investigated would be particularly evident when an elderly stereotype was primed.

Overview of Hypotheses and Studies

We hypothesized that different cultural mindsets affect the type of information that is extracted from the representation of an elderly stereotype and used as a basis for judgment. We expected that when a member of a stereotyped social category is encountered, people with a collectivist mindset more likely to draw upon situation-specific behaviors as a basis for their decisions. In contrast, those with an individualist mindset are more likely to rely on trait information for their decisions (Hypothesis 1). These different dispositions may be reflected

in the speed with which they retrieve and respond to trait and behavioral information. That is, we expected people with a collectivist mindset to be slower at responding to traits than those with an individualist mindset. However, we expected them to be faster at responding to behaviors than those with an individualist mindset (Hypothesis 2). Finally, the effects of cultural mindsets might have consequences for how stereotyped members are judged in work settings. For example, upon encountering poor performance in the workplace, those with a collectivist mindset might be more predisposed than those with an individualist mindset to make behavior based attributions rather than trait based attributions. This might lead the former to be less harsh in judging non-performance by the elderly because they consider such performance to be specific to a particular context and not a function of a general trait disposition that is applied across multiple situations (Hypothesis 3). Accordingly, their response to poor performance behaviors in a particular context might be restricted to removing the person from that context rather than a more general punitive response (Hypothesis 4).

In evaluating our hypotheses, two further considerations are worth noting. First, our conceptualization focuses on the effects of cultural mindsets on the subset of stereotype based knowledge that people bring to bear on judgments. To this extent, these differences could be reflected in attitudes toward members of the stereotyped group, which are based on this knowledge. However, although cultural mindsets may influence the type of content that people access and use as a basis for their attitudes, the implications of this knowledge for attitudes are difficult to predict a priori. Furthermore, individuals may have acquired conditioned affective responses to a stereotyped category that they use as a basis for their attitudes independently of the specific content that is accessible in memory. Therefore, although we assessed differences in attitude in several of the studies we report, we had no a priori expectations for the nature of these differences.

A second consideration surrounds the relevance of the stereotype-related information that people consider to themselves. According to our conceptualization, the processing strategies that are activated by a cultural mindset influence the relative accessibility of the traits and behaviors contained in the stereotype independently of their personal relevance. Although knowledge may generally be processed more extensively when it is self-relevant (Rogers, Kuiper, & Kirker, 1977), these differences seemed unlikely to be systematically related to the cultural mindsets we induced. We nevertheless examined this contingency in Experiment 3.

Five experiments confirmed these hypotheses. Experiment 1 showed that priming an age-related stereotype increased individualists' reliance on trait descriptions of a stereotyped person but decreased their descriptions of the person's behavior. However, it had the opposite effect on collectivists' reliance on trait and behavior descriptions. Experiments 2 and 3 showed that these dispositions were also reflected in the time that individualists and collectivists took in responding to trait and behavior descriptions of a stereotyped person. As expected, these effects were independent of whether people's attitude towards the elderly and whether the behavior was self-relevant or not. Finally, Experiments 4 and 5 examined the implications of this type of information processing on how a person was evaluated in a work setting where a stereotype-related behavior was relevant. Priming a stereotype increased individualists' reliance on traits and collectivists' reliance on behaviors in judging the individual with the latter making more favorable judgments (Experiment 4). This tendency as also evident in the types of solutions they came up with when a member of the stereotyped group was not performing (Experiment 5).

EXPERIMENT 1

Experiment 1 determined whether participants' cultural mindset influenced the type of stereotype related knowledge that they use in making decisions. Participants were asked to

imagine they worked in an organization and had to give suggestions to the management about which of two consultants they should hire. Participants were then presented with a choice task in which they had to choose between one of two consultants. In the *age prime* condition, one consultant was described as 67 years old whereas the other as 35 years old. In the *control* condition, however, age was not revealed. After choosing one of the two consultants, participants gave open-ended reactions to the consultant they chose. We expected that age priming would activate the dimension elderly versus youthful as an additional criterion in decision-making. The implications of this criterion in decision-making would be evident in the extent to which participants made inferences about the candidate's traits and behaviors. We predicted that when age related information was available, participants with a collectivist mindset would be more likely to describe the chosen consultant in terms of behaviors whereas participants with an individualist mindset would be more likely to describe the chosen consultant in terms of traits.

Method

Participants. One hundred sixty Hong Kong university students (Mean age 20.5 years, 81% female) participated in the study for course credit. They were assigned randomly to cells of a 2 (cultural mindset: individualist vs. collectivist) x 2 (stereotype activation: age prime vs. no age prime) design.

Procedure. The entire study was conducted in Chinese. Participants were told that they would perform an impression formation task in which they would be asked to evaluate a person based on a short description. They were told that before performing this task, however, they would be given a language task. The language task was used to manipulate cultural mindset. Participants read a short paragraph that described eating at a restaurant (appendix A.1) and identified and clicked on the pronouns that were contained in it (Kuhnen & Oyserman, 2002; Oyserman et al., 2009). In the *individualist mindset* condition, the

paragraph contained first-person singular Chinese pronouns such as 我 (I), 自己 (myself), 我的 (my/mine). In the *collectivist mindset* condition, the paragraph contained first-person plural Chinese pronouns such as 我們 (We), 大家 (ourselves), 我們的 (ours, us) etc.

Participants then performed the impression formation task. They were told to imagine working for a company that was not doing well and that the management team was planning to hire a consultant to solve their problems. They then read descriptions of two consultants, A and B (Appendix A.2). Consultant A was described as being a graduate from a prestigious school and had a reputation for being careful/maybe slow with numbers and for having a cautious/low-risk disposition. Consultant B was also a graduate from a famous school and had a reputation for being quick/maybe careless with data and having a bold/high-risk disposition. Those in the *age prime* condition were told that consultants A and B were 67 and 35 years old, respectively. In *control* conditions, the consultants' ages were not mentioned.

Once they had finished reading the description, participants indicated which consultant they would choose (A or B) and then provided open-ended descriptions of why they made their choice. To confirm the effect of our mindset priming manipulation, participants were asked to think back to the pronoun task and indicate the extent to they had thought about (a) themselves and (b) their friends and family while performing the task along scales from 0 (not at all) to 10 (a lot). Finally, they answered demographic questions about their gender, age, education and ethnicity.

Results and Discussion

Manipulation check. The effect of activating a mindset in this and other studies (see Table 1) was inferred from the difference between the extent to which participants reported thinking about friends and family and the extent to which they reported thinking about themselves. Participants reported thinking relatively more about their friends and family if

they had a collectivist mindset (M_{diff} = .46) than if they had an individualist mindset (M_{diff} = -.78), F (1, 159) = 12.32, $p < .01$, $\eta_p^2 = .072$.

Choice of consultant. Participants with a collectivist mindset were as likely to choose consultant A when the consultant's age was mentioned (M = 40%) as when it was not (M = 40%). Participants with an individualist mindset also did not differ in their choice of A in the two conditions (38% vs. 50%). The interaction of mindset and age priming was not significant, Wald $\chi^2 < 1$. Thus, consultants' age did not significantly influence whether participants' with different mindsets chose them.

Thought listings. We expected that participants with a collectivist mindset would be more likely to use behaviors in their descriptions when they were primed with age whereas participants with an individualist mindset would be more likely to use traits in this condition. To examine this possibility, participants' open-ended descriptions of why they chose a particular consultant were coded in terms of both (a) the number of traits they mentioned and (b) the number of behaviors they mentioned ("he will bring about positive change", "he will make good decisions", "he will make more errors" etc.). Thoughts were coded independently by two researchers and analyzed for inter-coder reliability. When necessary, differences in coding were resolved through discussion. Coding for number of traits mentioned produced a Krippendorff's alpha of .88 while coding for number of behaviors mentioned produced a Krippendorff's alpha of .96.

An analysis of these data as a function of mindset, age priming and description type (traits vs. behaviors) revealed a significant 3-way interaction of these variables, F (1, 156) = 22.38, $p < .001$, $\eta_p^2 = .126$. The nature of this interaction is shown in Table 2. An analysis of trait descriptions alone revealed a significant interaction of mindset and age prime, F (1, 156) = 5.63, $p = .02$, $\eta_p^2 = .035$. When an age-related stereotype was not primed, participants with

an individualist mindset did not differ from those with a collectivist mindset in their inclination to describe the target in terms of traits (1.30 vs. 1.09, respectively). However, when an age-related stereotype was activated, they were significantly more likely to do so (1.78 vs. 0.89, respectively; F (1, 156) = 19.30, $p < .001$, $\eta_p^2 = .19$.

An analysis of behavior descriptions alone also revealed an interaction of mindset and age priming, $F(1, 156)= 36.37$, $p < .001$, $\eta_p^2 = .19$. Collectivists were no more likely than individualists to describe the target in terms of behaviors when an age-related stereotype was not primed (0.30 vs. 0.50 respectively) but were significantly more likely to do so when the target's age was salient (1.36 vs. 0.50, respectively), F (1, 156) = 50.07, $p < .001$, $\eta_p^2 = .34$).

These results provide preliminary evidence that inducing an individualist mindset increases the disposition to use trait concepts when participants are primed with an age-related prime, whereas inducing a collectivist mindset increases the disposition to use behaviors.

EXPERIMENT 2

Experiment 2 induced different cultural mindsets using a pronoun-circling task. Then, some participants were subliminally primed with the category "elderly" whereas others were not. Finally, participants were given a lexical-decision task containing stereotype-related trait words, non-trait words and non-words. We predicted that people would be less likely to have trait information accessible if they have a collectivist mindset than if they have an individualist mindset.

Method

Participants. One hundred twenty-seven university students (Mean age 20.35 years, 46% female) from Hong Kong participated in exchange for HKD 50. They were assigned

randomly to cells of a 2 (cultural mindset: individualist vs. collectivist) x 2 (stereotype activation: elderly vs. no prime) design.

Procedure. Cultural mindsets were induced using a pronoun-circling task (Kuhnen & Oyserman, 2002; Oyserman, Sorensen, Reber & Chen, 2009). Specifically, participants were given a passage as part of an English grammar exercise being pretested for the University language center. In *individualist mindset* conditions, they were asked to circle first-person singular pronouns (e.g., "I", "my" etc.) whereas in *collectivist mindset* conditions, they were asked to circle first person plural pronouns (e.g., "we" "our" etc.).

Then, participants performed an ostensibly unrelated visual perception task in which trait descriptions of the elderly were subliminally primed using procedures similar to those employed by Adaval and Monroe (2002). Participants were told that they would be shown different strings of letters (e.g. ccccccc) on the computer and were asked to indicate whether the letters were vowels or consonants by pressing pre-specified keys on the keyboard. Participants completed a series of 46 such trials. After participants had responded to each string of letters, a series of dashes appeared for 1.5 seconds followed by a word for 16 ms, and then a mask for 120 ms. to prevent any after image. In *elderly priming* conditions, the primed words were related to the elderly (i.e., "old", "elderly" "aged"). In *control* conditions, participants completed the same task but no subliminal words were shown between the series of dashes and the mask.

Finally, participants completed a lexical decision task that was presented in the guise of a second visual perception task. Participants were required to distinguish words from non-words by pressing one of two designated keys. They were told that speed and accuracy were both equally important and that the computer would record both. Participants were given a word list and asked to respond to words and non-words by pressing designated keys on the

keyboard. The task consisted of two blocks of 40 trials each. Each block contained four stereotype-related traits ("slow," "kind," "wise," and "old"), three non-trait words associated with the elderly ("cane," "retired," "denture"), 16 unrelated words ("chair," "cloud," etc.) and 17 non-words (e.g., "leorf," "yobui," etc.). The order of items in one block was the reverse of items in the other so that the mean serial position of each item was the same. Response time served as the primary dependent variable.

Participants then completed Kogan's (1961) measure of attitudes towards the elderly. Scores on this scale ranged from 2.50 to 4.50 with higher scores indicating more favorable attitudes towards the elderly. Finally, they were given a funnel-debriefing task to assess if they had noticed the subliminal primes and had determined the relationship between the elderly prime and the subsequent task. None had.

Results and Discussion

Accuracy. An analysis of subjects' accuracy in responding to trait words on the lexical decision task yielded no significant effects (Fs < 1). Accuracy was no different when participants were primed with the elderly (M = 95.4%) than when they were not (M = 95.7%), and this was true regardless of whether an individualist mindset was activated (98.1% vs. 95.4%) or a collectivist mindset was activated (92.7% vs. 96.1%).

Response Times. An analysis of response times to the 4 trait words yielded a significant interaction of elderly priming and cultural mindsets, F (1,122) = 8.19, p = .005, η_p^2 = .062. The nature of this interaction is shown in Table 3. As expected, participants with a collectivist mindset responded more slowly to the trait words when they had been primed with the elderly than when they had not (599.31 ms vs. 540.04 ms, respectively; F (1,122) = 6.51, p = .011, η_p^2 = .049. In contrast, participants with an individualist mindset responded nonsignificantly faster to these items in the former conditions than in the latter (532.98 ms vs.

567.76 ms, respectively), F (1,122) = 2.24, p = .137, η_p^2 = .017. These effects were independent of the valence of the words. Separate analyses of responses to positively valenced and negatively valenced trait words yielded a significant interaction of elderly priming and cultural mindsets in each case (for positively valenced trait words, F (1,122) = 5.61, p = .02, η_p^2 = .044; for negatively valenced trait words, F (1,122) = 7.85, p = .006, η_p^2 = .060). Supplementary analyses using valence as a repeated measure revealed an interaction of cultural mindset and elderly priming, F (1,122) = 8.19, p < .005, η_p^2 = .063, that did not depend on the valence of the trait words, F (1,122) = 2.83, p = .10, η_p^2= .023. This suggests that cultural mindsets affect the type of trait knowledge that is accessed from the stereotype independently of its valence or content.

Analyses of response times to non-trait words also yielded a marginally significant interaction of elderly prime and cultural mindset, F (1,122) = 3.49, p = .064, η_p^2 = .028. However, simple effects showed no difference between elderly priming and no priming conditions regardless of whether participants had a collectivist mindset (M = 771.30 vs. 705.91), F (1,122) = 2.29, p > .133, η_p^2 = .018, or an individualist mindset (M = 686.92 vs. 735.66), F (1,122) = 1.27, p > .262, η_p^2 = .01. Therefore, response time data support our hypothesis that when participants are primed with a stereotyped social category, they respond more slowly to stereotype-related trait words if they have a collectivist mindset than if they have an individualist mindset.

Attitudes. An analysis of attitudes towards the elderly showed that participants reported generally more favorable attitudes toward the elderly when they had a collectivist mindset (M = 3.52) than when they had an individualist mindset (M = 3.36), F (1,122) = 9.09, p = .003, η_p^2 = .069). However, the interaction of mindset and elderly prime was not significant, F < 1. That is, when participants had a collectivist mindset, their attitudes did not depend on whether an elderly stereotype was primed (M = 3.56) or not (M = 3.48) (F < 1).

This was also true of participants with an individualist mindset (M = 3.34 vs. M = 3.36, respectively; F<1). Thus, the elderly prime had little effect on participants' attitude towards the elderly.

Although people's prior attitudes towards members of a category can sometimes influence their speed of responding when they are primed with the category (Cesario, Plaks & Higgins, 2006), there was no evidence in the present study that this was the case. We regressed response time to trait words on cultural mindset, elderly prime, their interaction term and the measure of attitudes towards elderly. Results showed that the attitude measure did not mediate the interaction of cultural mindset and elderly prime on responses to trait words (β = -.13, t = -1.39, p = .17). Moreover, bootstrapping (Preacher & Hayes, 2007) showed no evidence that the interactive effect of elderly priming and mindsets on trait responses was mediated by attitudes towards the elderly (based on 5000 bootstrapping samples, 95% CI: -8.3775, 1.7453 that included zero). The main effect of attitudes towards elderly on responses to trait words was also non-significant (β = -.065, t = -.723, p = .47).

Furthermore, the interactive effects of attitudes with cultural mindsets and with elderly prime had nonsignificant effects on responses to traits (in each case, p > .20). This suggests that the effect of cultural mindsets and elderly priming on responses to traits was independent of their attitudes towards the elderly. This is a bit surprising given that participants with a collectivist mindset reported more favorable attitudes towards the elderly than those with an individualist mindset. It is possible that participants with both mindsets have similar attitudes towards the elderly but those with a collectivist mindset overcorrect their attitudes while responding to the attitude towards the elderly scale.

EXPERIMENT 3

Although collectivists are less likely than individualists to activate stereotype-related trait concepts, they should be more likely than individualists to activate stereotype-related

behaviors. Experiment 3 evaluated this hypothesis. In doing so, it also examined the possibility that collectivists, unlike individualists, thought about the stereotyped category with reference to themselves. If this were true, they might respond more quickly to stereotypic self-related behaviors when a stereotype was primed than to other stereotype-relevant behaviors. In fact, however, this was not the case.

Method

Participants. One hundred six Hong Kong university students (Mean age 20 years, 75% female) participated for pay of HKD 60. They were assigned to cells of a 2 (cultural mindset: individualist vs. collectivist) x 2 (stereotype activation: elderly vs. none) design with behavior type being manipulated within subjects.

Procedure. Cultural mindsets and the activation of an elderly stereotype were manipulated using the same procedures employed in Experiment 2. After completing the mindset manipulation and elderly priming task, participants moved on to an ostensibly unrelated study that concerned the interpretation of everyday behaviors. They were told that although some behaviors were unambiguously good or bad, others were ambiguous. (For example, the behavior, "he spoke loudly" could be interpreted as good if a person was lecturing in class but as bad if the person was talking in a movie theatre.) They were told that to understand people's reactions to such behaviors, they would be shown a series of behaviors on the computer, some of which pertained to themselves and others of which did not. They were asked to report the favorableness of each by pressing one of two keys on the keyboard. They were told to respond as quickly and honestly as they could, as there were no right answers and because we were merely interested in their initial reaction to these behaviors.

Participants were then presented with a sequence of 40 behaviors, 9 of which were consistent with an elderly stereotype and 31 of which were stereotype-irrelevant. Target behaviors, which were built around concepts of "slow" "rigid" and "helpless," were of 3 types: *self-related* (e.g., "He walked slowly in front of you"), *self-unrelated* ("He walked slowly in front of her") and *self-referent* ("You walked slowly"). Non-target behaviors were sentences unrelated to elderly traits (e.g. "She paid her bills on time", "He lent you his pen" etc.). The three types of target sentences were presented in three different orders such that (a) an equal number of participants in each experimental condition received each type of sentence first and (b) the mean serial position of the sentences was counterbalanced.

Finally, participants completed a manipulation check to assess the manipulation of mindsets by indicating the extent to which they were thinking about (a) themselves and (b) their friends and their family when reading the paragraph used for pronoun circling along a scale from 0 (not at all) to 10 (a lot). They also completed Kogan's measure of attitudes towards the elderly**.**

Results

Manipulation Check. We calculated the difference between the extent to which participants thought about their friends and family and themselves. Participants were more likely to think about friends and family when a collectivist mindset was activated (M_{diff} = -.28) than when an individualist mindset was activated (M_{diff} = -1.06), F (1, 105) = 3.70, p = .06, η_p^2 = .034).

Response Times. The time to respond to each of the three types of target behavior is shown in Table 4 as a function of cultural mindset and stereotype activation. Analyses of these data yielded an interaction of these variables, F (1, 102) = 7.80, p = .006, η_p^2 = .071 that was not contingent on behavior type, F < 1. Participants with a collectivist mindset

responded more quickly when an elderly stereotype was primed (M = 1636.02 ms) than when it was not (M =1938.31 ms), F(1, 102) = 6.55, p = .01, η_p^2 = .131, and this difference was similar for self-related behaviors (1559.92 ms vs. 1909.05 ms), self-unrelated behaviors (1722.83 ms vs. 2042.94 ms) and self-referent behaviors (M = 1625.30 ms vs. 1862.95 ms). In contrast, people with an individualist mindset responded nonsignificantly slower when a stereotype was primed than when it was not (1893.18 ms vs. 1726.01 ms), and this was also true for all three types of behaviors (1855.77 ms vs. 1701.04 ms, 2101.67 ms vs. 1816.90 ms, and 1722.10 ms vs. 1660.09 ms), in the case of self-related, self-unrelated and self-referent behaviors, respectively).

These results are quite consistent with expectations. It is interesting to note, however, that responses to stereotype-unrelated behaviors, summarized in the last section of the table, show a similar pattern. Analyses of these data yielded an interaction of elderly priming and mindset, F (1, 102) = 12.46, p < .001, η_p^2 = .109. Specifically, participants with a collectivist mindset responded more quickly when an elderly stereotype had been primed than when it had not (M = 1452.90 ms vs. 1695.85 ms), F (1, 102) = 6.63, p = .011, η_p^2 = .152. In contrast, participants with an individualist mindset responded more slowly when an elderly stereotype had been primed than when it had not (M = 1749.83 ms vs. 1521.84 ms), F (1, 102) =5.84, p = .017, η_p^2 = .082. Thus, activating a stereotype influenced the speed of responding to not only stereotype-related behaviors but non-stereotypic behaviors as well.

Attitudes. In this experiment, participants reported generally similar attitudes toward the elderly when they had a collectivist mindset (M = 3.67) than when they had an individualist mindset (M = 3.59), F (1,102) = 1.02, p = .31, η_p^2 = .010). As in Experiment 2, however, the interaction of mindset and elderly priming was not significant, F < 1. Participants' attitudes did not depend on whether an elderly stereotype was primed or not, and this was true regardless of whether they had a collectivist mindset (3.69 vs. 3.63,

respectively) or an individualist mindset (3.57 vs. 3.62, respectively), $F < 1$). Bootstrapping analyses (Preacher & Hayes, 2007) further confirmed that interactive effect of elderly priming and mindsets on responses to behaviors was not mediated by attitudes towards the elderly (based on 5000 bootstrapping samples, 95% CI: -8.3775, 1.7453 that included zero).

Discussion

The results of Experiment 3 support our contention that people respond more quickly to stereotype-related behaviors when a collectivist mindset is activated. Moreover, this is true regardless of whether the behaviors are self-referential or not. Thus, cultural mindsets did not affect people's tendency to think of the stereotyped group or behavior in relation to themselves. Rather, they altered the manner in which participants process different types of stereotype relevant information. Furthermore, this only occurred when a stereotype was activated. Thus, it does not reflect a general tendency to respond differently to behavioral information.

The evidence that the interactive effects of mindset and stereotype activation on response times generalized to stereotype-unrelated behavior is noteworthy. This effect cannot be attributable to a general disposition for collectivists to respond more quickly to behaviors than to traits, as the effect was evident only when a stereotype had been activated. However, once the processes that are associated with different mindsets are activated, they are applied to behaviors more generally.

Experiments 1-3 in conjunction provide evidence in support of our conceptualization that cultural mindsets influence the type of stereotype related knowledge that participants draw on when they are exposed to the elderly. This was reflected in the criteria that participants used for their decisions (experiment 1) and was validated through reaction time data in Experiments 2 and 3. However, the implications of how these play out in reactions to

elderly workers in organizational settings are relatively unclear. Experiments 4 and 5 provided some preliminary data regarding the implications of our findings.

EXPERIMENT 4

This experiment examined the differential accessibility of traits and behaviors in reacting to an elderly worker in an organizational setting. We were particularly interested in the extent to which participants would make dispositional attributions versus situational attributions when the reason for the worker's poor performance was ambiguous.

Cultural differences in causal attributions often reflect a dispositional bias (Morris & Peng, 1994; Norenzayan & Nisbett, 2000; Choi, Nisbett & Norenzayan, 1999; Norenzayan, Choi, & Nisbett, 2002; Peng & Knowles, 2003). Members of individualist cultures tend to focus on dispositional explanations of behavior whereas members of collectivist cultures consider situational explanations as well. Knowles, Morris, Chiu and Hong (2001), for example, showed that East Asians automatically correct for a dispositional bias once they take situational influences into account, whereas Westerners do not make this correction. We examined implications of these findings under conditions in which individualism and collectivism were situationally primed.

We expected that participants with a collectivist mindset would avoid making dispositional attributions for an elderly co-worker's poor performance when they were primed with an elderly stereotype than when they were not, and would judge the co-worker more favorably in the former case than in the latter. In contrast, we expected participants with an individualist mindset to make dispositional attributions and that their evaluations of the co-worker would not be appreciably influenced by elderly priming. Finally, participants with a collectivist mindset should be more likely than those with an individualist mindset to

describe the co-worker in terms of behaviors rather than traits when an elderly stereotype was primed.

Method

Participants. One hundred thirty-six subjects (Mean age 34 years, 46% female) recruited through Amazon's Mechanical Turk participated in the study in exchange for 30 US cents. Analysis of the subjects' self-reported data revealed that European-Americans comprised a majority of the subjects (53.7%), with Asians forming the second largest group (26.5 %). The remaining subjects included African-Americans (6.6 %), Hispanic/Latinos (4.4 %), East Asians (4.4%) and others (4.4%). The data also showed that most subjects had completed an undergraduate degree (40.4 %), a lot of them had at least finished high school (25 %), while some had even completed graduate-level (22.1 %) and postgraduate-level (12.5 %) degrees. These subjects were assigned randomly to cells of a 2 (cultural mindset: individualist vs. collectivist) x 2 (stereotype activation: elderly vs. no prime) design.

Procedure. Participants were told that they would perform an impression formation task but that before doing so, they would be given a test of English proficiency. On this pretext, they were asked to read a short paragraph containing a description of a visit to a city (appendix B.1) and were asked to identify the pronouns contained in it. The paragraph contained first-person singular pronouns (I, me, my. etc.) in *individualist mindset* conditions but contained first-person plural pronouns (we, us, our, etc.) in *collectivist mindset* conditions.

After completing the language task, participants performed the impression formation task. Participants first read the description of a group of co-workers who were working on an important project (appendix B.2). The description indicated that the group was facing problems with one of their co-workers who was always late and missed deadlines but he always had an excuse for his behavior (e.g. flu, accident, marriage troubles etc.). Although

these problems could have been genuine, the group believed that he was just lazy and irresponsible. In the end, the project could not be completed because group morale was low. In *elderly priming* conditions, the coworker was described to 63 years old. In *control* conditions, the age of the coworker was not given.

After reading the description, participants reported the extent to which the group's reaction to the co-worker was justified along a scale from 0 (not at all) to 10 (very much), the extent to which the co-worker's behavior was due to his personality or to external circumstances along a scale from 0 (personality) to 10 (external circumstances) and their impression of the co-worker along a scale from 0 (very unfavorable) to 10 (very favorable). Participants also answered an open-ended question asking to explain their reactions to the coworker. Finally, participants were asked to think back to the pronoun task and indicate the extent to which they were thinking about themselves or about their friends and family along scales from 0 (not at all) to 10 (a lot).

Results and Discussion

Manipulation check. The effect of our manipulation was inferred from the difference between the extent to which participants thought about their friends and family and the extent to which they thought about themselves. Participants reported thinking about their friends and family to a greater extent when they had a collectivist mindset (M_{diff} = -.31) than when they had an individualist mindset (M_{diff} = -1.55) (F (1, 135) = 6.42, p = .01, η_p^2 = .046).

Justification of the group's reaction. Participants' beliefs that the group's reaction to the co-worker was justified are shown in Table 5 as a function of elderly priming and cultural mindset. Analyses of these data yielded no significant effects (Fs < 1). Participants' beliefs did not depend on whether an elderly stereotype was primed or not and this was true

regardless of whether they had a collectivist mindset (8.15 vs. 8.39, respectively) or an individualist mindset (7.77 vs. 8.29, respectively); $F < 1$ in each case.

Impression of co-worker. We expected that when an elderly stereotype was primed, participants with a collectivist mindset would be more likely than those with an individualist mindset to attribute the co-worker's behavior to situational factors and, therefore, to evaluate him relatively more favorably. This expectation was confirmed. An analysis of participants' impressions of the coworker revealed a significant interaction of mindset and elderly priming (F (1, 132) = 5.75, p = .02, η_p^2 = .042). As the second section of Table 5 shows, participants with a collectivist mindset had a more favorable impression of the co-worker in elderly priming conditions (M = 5.24) than in control conditions (M = 4.09) (F (1, 132) = 4.29, p = .04, η_p^2 = .039) and had a more favorable impression in elderly priming conditions than individualists had (5.24 vs. 3.71) (F (1, 132) = 7.80, p = .006, η_p^2 = .088). In fact, when participants had an individualist mindset, an effect of elderly priming was not evident ($F < 1$).

Attributions and thought listings. Similar to study 1, open-ended thought listings with regards to their reaction to the coworker were coded by two independent researchers. Coding for attributions, number of traits and number of behaviors mentioned produced a Krippendorff's alpha of .89, .92 and .96 respectively. We expected that when an elderly stereotype was primed, participants with a collectivist mindset would be more likely to attribute the coworker's behavior to situational factors than participants with an individualist mindset would. Although this difference was in the expected direction (6.03 vs. 5.03, respectively, see Table 5), it was not significant (F (1, 132) = 2.16, p =. 15, η_p^2 = .034. However, individuals' open-ended explanations of the coworker's actions tell a different story.

The mean number of traits and behaviors that were mentioned in the explanation are shown in the fourth and fifth sections of Table 5. An analyses of these data using type of

explanation as a repeated measure yielded a significant 3-way interaction of mindset, elderly priming and explanation type, F (1, 132) = 21.97, $p < .001$, $\eta_p^2 = .143$. The implications of this interaction can be seen most easily from the difference between the number of behaviors mentioned and the number of traits mentioned in each condition, which are summarized in the last section of the table. Positive numbers indicate a relatively greater reliance on behaviors. As these data indicate, collectivists described a relatively greater number of behaviors in their explanations when an elderly stereotype was primed ($M_{diff} = 0.84$) than when it was not (F (1, 132) = 14.74, $p < .01$, $\eta_p^2 = .179$), and described a relatively greater number of behaviors in this condition than individualists did ($M_{diff} = -0.40$) (F (1, 132) = 27.54, $p < .01$, $\eta_p^2 = .246$). Moreover, the interaction of mindset and elderly priming was significant in separate analyses of both trait descriptions (F (1, 132) = 7.26, $p < .01$, $\eta_p^2 = .052$) and behavior descriptions (F (1, 132) = 25.57, $p < .001$, $\eta_p^2 = .162$). Thus, despite the nonsignificant effects of mindset and elderly priming on participants' reports of the reasons for the coworker's actions, the different types of information that entered into participants' open-ended explanations of these actions clearly support our predictions.

Mediation. The interactive effect of cultural mindsets and elderly priming on impressions of the coworker was significantly mediated by its effect on the difference score between behaviors and traits. A regression analysis of the difference score on cultural mindsets, elderly prime, and their interaction revealed a significant interaction ($\beta = 1.294$, $SE = .45$, $t = 2.91$, $p < .01$). Bootstrapping (Preacher, Rucker, & Hayes, 2007) indicated a significant indirect effect of these descriptions (based on 5000 samples, the 95% CI ranged from .0060 to .6581 that excluded zero).

In summary, Experiment 4 suggests that in a work setting, non-performance by a team member is perceived negatively regardless of age. However, impressions of a co-worker were relatively more favorable among those with a collectivist mindset as they appeared hesitant to

label him as “lazy” and “irresponsible”. They were also more likely to use behavioral information in forming their impressions (as evident in the mediation analysis). Finally, we also explored whether any of the demographic variables (specifically age, education and ethnicity) had any effect on the dependent variables given that the data are skewed towards Caucasians (53.7%). Although there was an effect of ethnicity on the impression of the co-worker such that Caucasians had a less favorable impression of the co-worker compared to Asians and East Asians, this did not interact with our main independent variables. Further, controlling for these variables did not alter our results. Also, those with lower education levels used more behavioral descriptions while those with higher education levels use more trait descriptions, this difference did not depend on the elderly prime or the cultural mindset prime.

EXPERIMENT 5

Experiment 4 showed that participants with a collectivist mindset were more likely than those with an individualist mindset to attribute a stereotyped worker’s failure to fulfill his responsibilities to situational factors rather than to a chronic disposition of the person and that they consequently evaluated him relatively more favorably. In this experiment, however, a specific job-related behavior was not mentioned. If a specific stereotype-related behavior is critical to job performance, people with a collectivist mindset may be *more* disposed to react to the behavior when they are primed with the elderly than when they are not. At the same time, they may not attribute the behavior to a general disposition, and may not evaluate the person more negatively. Rather, they may be more inclined to place him in a job to which this specific behavior is not detrimental.

Experiment 5 examined this possibility. In this study, a person was described as performing slowly but carefully in a job to which speed and efficiency were important (e.g.,

checking in airline passengers). The employee was either described as being elderly or no age information was provided. We expected that participants with a collectivist mindset would react to this behavioral information and be more likely to recommend that the person be transferred to a position for which speed was less critical when they had been provided with age information than when they had not.

Method

Participants. One hundred sixty Chinese students (Mean age 20.5 years, 81% female) from a university in Hong Kong participated in the study in exchange for a credit. They were assigned randomly to cells of a 2 (cultural mindset: individualist vs. collectivist) x 2 (stereotype activation: elderly vs. no prime) x 2 (scenario replication) between-subjects design.

Procedure. Participants completed the entire study in Chinese. Participants were told that they would be completing an impression formation task in which they would be asked to evaluate a person based on a short description. Before the impression formation task, they were told that they would be given a language task, similar to Experiment 1. However, in this study, participants read a short Chinese paragraph describing a visit to a city (appendix C.1). In the individualist mindset condition, the paragraph contained first-person singular Chinese pronouns such 我 (I), 自己 (myself), 我的 (my/mine) etc. while in the collectivist mindset condition, the paragraph contained first-person plural pronouns such as 我們 (We), 大家 (ourselves), 我們的 (ours, us) etc.

Participants then performed the impression formation task. Participants read descriptions of an employee (appendix C.2). In one scenario, the employee was working with a bank as a teller and had long queues of customers because he was careful while recording money amounts for deposits and withdrawals. In the other scenario, the employee was

working with an airline and had long queues of passengers because he was careful to check the passengers' names. In the *elderly priming* condition, the employee's age was 63 years old, whereas age was not mentioned in control conditions.

After reading the scenario, participants reported their belief that the company should shift the employee to another position and whether it should reward the employee along scales from 0 (not at all) to 10 (definitely) and indicated how much the employee should be rewarded along a scale from 0 (nothing) to 10 (a lot). Then, they provided open-ended explanations of their judgments.

Results

Preliminary analyses of the data as a function of mindset, elderly priming, and scenario replications yielded only one effect involving scenario in any analyses; a barely significant interaction of elderly priming and scenario on intentions to shift the employee (p = .048) that was not theoretically meaningful. For clarity, therefore, data are pooled over scenarios in the analyses to be reported.

Manipulation check. As in previous studies, the manipulation check was calculated as the difference between the extent to which participants thought about friends and family and the extent to which they thought about others. As expected, participants thought about friends and family significantly more when they had a collectivist mindset (M_{diff} = .04) than when they had an individualist mindset (M_{diff} = -1.81) (F (1, 156) = 20.86, $p < .01$, η_p^2 = .117).

Intention to shift the employee. Participants' beliefs that the company should shift the employee are summarized in the first section of Table 6. Consistent with our predictions, analysis of these judgments revealed a significant interaction of mindset and elderly priming conditions, F (1, 156) = 4.87, p = .03, η_p^2 = .03. Elderly priming increased the tendency among those with a collective mindset to shift the employee to another job (M = 4.95 vs. 3.95 for elderly prime and control conditions respectively), F (1, 156) = 3.92, p = .05, η_p^2 = .03.

However, elderly priming did not have a similar effect for those with an individualist mindset, (4.23 vs. 4.80, for elderly and control conditions respectively; F (1, 156) =1.30, p = .26, η_p^2 = .17).

Intention to reward the employee. Beliefs that the employee should be rewarded and judgments of how much he should be rewarded were averaged (α = .71). Analysis of these scores, shown in the second section of Table 6, revealed no significant effects, F < 1. That is, participants were just as likely to believe that the employee should be rewarded in elderly priming conditions (M = 5.06) as they were in control conditions (M = 5.27) and this was true regardless of whether they had a collectivist mindset or an individualist mindset.

Thought listings. The number of traits and behaviors mentioned in participants' thought listings were computed as in other experiments. Coding for number of traits and behaviors mentioned produced a Krippendorff's alpha of .94 and .88. These data are shown in Table 6. An overall analyses in which the type of description was included as a repeated measure yielded a three-way interaction involving description type, elderly priming and mindset, (F (1, 156) = 20.47, p < .001, η_p^2 = .116). Analyses of trait descriptions alone revealed a significant interaction of mindset and elderly prime, F (1, 156) = 7.89, p < .01, η_p^2 = .048. Participants with a collectivist mindset were less likely to describe the employee in terms of traits when an elderly stereotype was primed (M = 0.61) than when it was not (M = 0.91) (F (1, 156) = 2.29, p = .13, η_p^2 = .04). However, participants with an individualist mindset were more likely to describe the employee in terms of traits in the former condition (M = 1.60) than in the latter (M = 1.11) (F (1, 156) = 4.75, p < .05, η_p^2 = .056). Moreover, participants in elderly priming conditions were much less likely to describe the employee in terms of traits when they had a collectivist mindset (M = 0.61) than when they had an individualist mindset (M = 1.60) (F (1, 156) = 24.84, p < .001, η_p^2 = .247).

Analysis of the behavior measure also revealed a significant interaction of mindset and elderly prime, F (1, 156) =16.35, $p < .001$, $\eta_p^2 = .095$. Those with a collectivist mindset were more likely to describe the employee in terms of behaviors in the elderly prime condition ($M = 1.35$) than in the control condition ($M = .51$), F (1, 156) = 40.78, $p < .001$, $\eta_p^2 = .339$). On the other hand, those with an individualist mindset were as likely to describe the employee in terms of behaviors when an elderly stereotype was primed ($M = .60$) as when it was not ($M = .51$) ($F < 1$). Moreover, participants primed with elderly were much more likely to describe the employee in terms of behaviors when they had a collectivist mindset ($M = 1.35$) than when they had an individualist mindset ($M = .60$), F (1, 156) = 32.70, $p < .001$, $\eta_p^2 = .313$.

Discussion

Participants with a collectivist mindset reported a greater disposition to shift the employee to another position when the employee's behavior was incompatible with job requirements. Nevertheless, collectivists were less likely than individualists to describe the employee in terms of traits and did not differ from individualists in their evaluation of him (as indicated by their willingness to reward the person). Thus, although collectivists were more inclined than individualists to shift the employee to a different position when they were aware that he was elderly than when he was not, this disposition did not generalize to their reactions to the employee as a whole.

GENERAL DISCUSSION

Our experiments show that activating different culture-related mindsets influences the type of information that stereotype-related content participants rely on as a basis for their decisions. An individualist mindset led to a greater use of traits whereas a collective mindset led to a greater use of behaviors. This was also reflected in participants' response time to

traits and behaviors. When people are primed with a group stereotype, those with a collectivist mindset respond more slowly to traits that are associated with the stereotype but respond more quickly to stereotype-related behaviors. We attributed these differences to the effects of individualist and collectivist mindsets on the features of the stereotype-based representation that individuals spontaneously activate and apply.

In conceptualizing these effects, we considered two possibilities. First, people might form two separate stereotype-based representations, one of which is composed largely of traits and the other of which is composed primarily of behaviors. An individualist mindset might dispose them to use the former representation, leading them to respond quickly to traits but not behaviors whereas a collectivist mindset might dispose them to use the latter representation, increasing their ease of identifying behaviors but not traits. When a stereotype is not activated, however, people would not use either representation and, therefore, might be equally likely to identify and use traits and behaviors regardless of their mindset. Our results are fairly consistent with this conceptualization. However, it seems intuitively unlikely that behaviors and the traits they exemplify would be stored in separate representations.

The second possibility we considered seems more plausible. That is, people form a single stereotype-based representation containing both traits and behaviors but process these features differently depending on their mindset. That is, an individualist mindset disposes them to focus on decontextualized, trait-based considerations whereas a collectivist mindset disposes them to focus on context-specific behavior. These differences are only evident, however, when a stereotype-based representation has been activated and used as a basis for judgment. If a stereotype has not been activated, or if a clear a priori stereotype-based representation has not been formed, people may recall traits and behaviors with equal likelihood regardless of their mindset. Note that the latter contingency distinguishes this conceptualization from the assumption that individualist and collectivist mindsets activate

more general dispositions to focus on abstract traits and context-specific behaviors, respectively, independently of the stereotype representation in which the features are contained. If this were so, the differences in processing of traits and behaviors that we observed would be evident in control conditions as well as when a stereotype is activated. This, however, was not the case.

These considerations nevertheless make salient a possible difference between the effects of situationally induced cultural mindsets and the effects of chronic differences in processing that exist between members of different cultures. As Nisbett (2003) and others have assumed, Westerners and Asians generally differ in their disposition to engage in relational processing and their sensitivity to contextual factors in making judgments. This difference could affect the use of traits versus context-specific behaviors as bases for judgments independently of their stereotype. The possible distinction between chronic cultural differences in processing and situationally induced differences may warrant further consideration.

Note that this conceptualization calls into question the common assumption that the stereotypes that are activated by exposure to a social group are exclusively trait-based. If this were so, the information processing strategies activated by cultural mindsets should influence the accessibility of stereotype-based traits in all cases. In fact, they influenced responses to traits and behaviors differently. Thus, our results are more consistent with the assumption that both traits and behaviors are included in the stereotype-based representation that individuals form. However, they are processed differently depending on the cultural mindset that is activated. Another notable aspect of our findings is that the interactive effects of cultural mindset and stereotype priming on responses to positive traits and responses to negative traits did not differ (see work by Hess, Hinson & Statham, 2004 for evidence that the valence of stereotype content affects participants recall of primes). We also did not find any differences

based on social roles (Koenig & Eagly, 2014) assigned to the elderly stereotypes – our studies use several types of roles such as consultants, group co-worker, bank/airline employee and obtained a similar pattern of results across these different roles.

Our results were obtained by activating differences in mindsets within a culture rather than by comparing effects across cultures. As suggested by previous research (cf. Chiu & Hong, 2007; Nisbett & Masuda, 2003; Kuhnen & Oyserman, 2002; Aaker & Lee, 2001), chronic differences in information processing and situationally-induced differences have similar effects. This is particularly true in bicultural societies where individuals are likely to access different cultural mindsets depending on the situation with which they are confronted. It is nevertheless conceivable that different stereotype-related knowledge structures coexist in Westerners and Asians. To this extent, the effects of priming cultural mindsets might not always be sufficient to override chronic cultural differences in their accessibility.

In this regard, the differences we observed were largely localized in the effects of collectivist mindsets. This is perhaps not surprising given that our participants were Hong Kong students who, although bicultural, are likely to have a chronic disposition to process information contextually. Our research nevertheless sheds light on how individuals with bicultural identities draw on stereotypic knowledge. Past research on biculturalism has shown how activating different cultural concepts can affect decision making (Briley, Morris & Simonson, 2005), creativity (Leung, Maddux, Galinsky & Chiu, 2008), recognition memory (Sui, Zhu & Chiu, 2007) and response to persuasion appeals (Lau-Gesk, 2003). Our studies add to this general body of work.

The evidence that priming a stereotype had greater effect on participants with a collectivist mindset than on those with an individualist mindset is consistent with findings reported by Chatman and Barsade (1995). They found that individualists were less likely to display cooperative behavior, even in collectivistic cultures. Individualists may be relatively

insensitive to contextual changes and therefore may tend to behave in a manner that is more consistent with their personality than with situational demands. In contrast, collectivists are less likely to display cooperative behavior in individualist cultures. Thus, unlike individualists, they are sensitive to contextual change, and behave in a way that is more consistent with situational norms rather than their personality.

Our results are worth considering in the context of findings reported by Ray et al., (2010). They found that people with interdependent self-construals tend to retrieve episodic memory traces and are more likely to base their self-judgments on their memory for social interaction behaviors than to base them on semantic knowledge about themselves. Studies by Wang and Conway (2004) also suggest that that behavioral information is more accessible among persons with a collectivist orientation. Research on spontaneous trait inferences (Zarate, Uleman & Voils, 2001) also suggests that the tendency to make spontaneous trait inferences might vary across cultures. That is, collectivists are less likely than individualists to extract trait information from sentences. In combination, these findings converge on the conclusion that members of collectivist cultures are hesitant to describe members of a stereotyped category using trait labels. At the same time, our results indicate that collectivists are equally likely to make quick stereotypic judgments when they are presented with behaviors.

Our findings have implications for behavior outside the laboratory. At the outset we noted the challenges posed by an aging workforce. Survey data indicate that older people are more likely than younger workers to be unemployed in the Hong Kong labor market (Ho, Wei & Voon, 2000). Unemployed workers above the age of 45 also receive fewer job offers and lower wages than their younger counterparts. While our findings suggest that participants with a collectivist mindset show a tendency to shift the employee from the current position when they are elderly than when they are not, future research in this area could examine if

such subtle forms of discrimination against elderly employees at the work place exist. (Our interpretation that this might be a subtle form of discrimination is based on the fact that the intention to shift the employee is negatively correlated with the intention to reward him.) To mitigate such negative effects and stereotype-related discrimination, more positive behaviors of the elderly might be showcased. If people from collectivist cultures typically have behavioral information more accessible, then presenting positive behaviors (e.g., showing the elderly working hard) might be received more favorably (Kwon, Saluja & Adaval, 2015) than the abstract information that typically appears in resumes. Further research on this issue might be considered.

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APPENDIX A.1

Individualist Condition

我不常外出吃飯，但每當我外出吃飯時我總是很難決定應該選擇哪間餐廳。泰國菜、墨西哥菜和印度菜都很美味，但我一向最愛的還是中國菜。我家附近有一間中國餐廳供應我嚐過最棒的菜式。每當我走進去，香氣都立即撲鼻而來。這一股香甜而辛辣的氣味常令我不禁飢腸轆轆。而當我坐下來點菜，餐牌上的每一道菜都吸引著我。我知道無論我點什麼菜式都會令我愉快。那些食物都很漂亮，令我差點因為要吃掉它們而感到難過。整頓飯最棒的地方是在當我精心挑選的甜點擺放在我面前的時候。在我最喜愛的餐廳裡，無論我點任何菜式，都不會出問題。

Collectivist Condition

我們不常外出吃飯，但每當我們外出吃飯時我們總是很難決定應該選擇哪間餐廳。泰國菜、墨西哥菜和印度菜都很美味，但我們一向最愛的還是中國菜。我們家附近有一間中國餐廳供應我們嚐過最棒的菜式。每當我們走進去，香氣都立即撲鼻而來。這一股香甜而辛辣的氣味常令我們不禁飢腸轆轆。而當我們坐下來點菜，餐牌上的每一道菜都吸引著我們。我們知道無論我們點什麼菜式都會令我們愉快。那些食物都很漂亮，令我們差點因為要吃掉它們而感

到難過。整頓飯最棒的地方是在當我們精心挑選的甜點擺放在我們面前的時候。在我們最喜愛的餐廳裡，無論我們點任何菜式，都不會出問題。

APPENDIX A.2

We are interested in how people make decisions and choices. In order to understand this, please imagine the following scenario.

You are working for a financial trading company. The company has done well in the past but has suffered a series of losses over the last few years. To recover from this, the management team is thinking of hiring one of the two consultants described below.

This decision is important because a wrong decision or wrong consultant can make things worse and the right one can turn the company around:

Age not-mentioned (Age mentioned)

Consultant A	Consultant B
Name: MR. LI HO MAN (67 years)	Name: MR. LEE MAN CHUNG (35 years)
Mr. Li Ho Man graduated from a prestigious business school where the quality of education he received was high.	Mr. Lee Man Chung graduated from a famous business known for its high quality education
His past clients indicated that he tends to be slow when looking at company data. They wondered if he was being careful or was just slow with numbers.	Clients that he worked with indicated that he tends to be quick when looking at past company data. They were not sure if he was being careless or was just quick with numbers.
They also said that he makes cautious strategic moves when making recovery suggestions. This could mean that he does not like taking risks or that he is not innovative in his solutions.	They also indicated that he makes very bold strategic moves when helping companies recover. This could mean that he is willing to take risks or innovative in the strategies he comes up with.

APPENDIX B.1

Individualist Condition

My city

I go to the city often. My anticipation fills me as I see the skyscrapers come into view. I allow myself to explore every corner, never letting an attraction escape me. My voice fills the air and the street. I see all the sights, I window shop, and everywhere I go I see my reflection looking back at me in the glass of a hundred windows. At nightfall I linger, my time in the city almost over. When finally I must leave, I do so knowing that I will soon return. The city belongs to me.

Collectivist Condition

Our City

We go to the city often. Our anticipation fills us as we see the skyscrapers come into view. We allow ourselves to explore every corner, never letting an attraction escape us. Our voice fills the air and street. We see all the sights, we window shop, and everywhere we go we see our reflection looking back at us in the glass of a hundred windows. At nightfall we linger, our time in the city almost over. When finally we must leave, we do so knowing that we will soon return. The city belongs to us.

APPENDIX B.2

Control condition

We are interested in how people form impressions of others based on bits of information they receive. To understand this we ask people to imagine scenarios and have them form impressions of strangers based on limited information about them.

Please read the scenario presented below and answer the questions that follow.

A group of coworkers was responsible for completing a very important company project. One problem frequently arose. A coworker consistently showed up late for meetings and missed important deadlines turning in his work late. He always had an excuse for his behavior. For example, one time he said that he came down with the flu. Another time, he said that his son had an accident and was accused of reckless driving. On a third occasion, he said that his wife was threatening to leave him for another man. Although these personal difficulties could have affected his behavior, other group members perceived him as slow, lazy, irresponsible and uncooperative. They lost patience with him, group morale suffered, and the group project was not completed.

Elderly condition

We are interested in how people form impressions of others based on bits of information they receive. To understand this we ask people to imagine scenarios and have them form impressions of strangers based on limited information about them.

Please read the scenario presented below and answer the questions that follow.

A group of coworkers was responsible for completing a very important company project. One problem frequently arose. A 63-year old coworker consistently showed up late for meetings and missed important deadlines turning in his work late. He always had an excuse for his behavior. For example, one time he said that he came down with the flu. Another time, he said that his son had an accident and was accused of reckless driving. On a third occasion, he said that his wife was threatening to leave him for another man. Although these personal difficulties could have affected his behavior, other group members perceived him as slow, lazy, irresponsible and uncooperative. They lost patience with him, group morale suffered, and the group project was not completed.

APPENDIX C.1

Individualist condition

我的城市

我時常去城市旅行。當我看到摩天大廈，令我想起了我對是次旅程的期望。我不想放棄欣賞任何一個景點，於是我要求自己去探索這城市的每一個角落。逛街中的我，在每條街道，每吋空氣中，也留下我的聲音。我欣賞所有觀光景點。而且還有一點，每當我到處遊覽，我總會在商店的玻璃櫥窗，看著自己的倒影在凝望著自己。入夜後我流連忘返，這也代表了我在城市的旅程差不多結束了。當我離開這城市時，我知道我很快會再回來。這個城市是屬於我的。

Collectivist condition

我們的城市

我們時常去城市旅行。當我們看到摩天大廈，令我們想起了我們對是次旅程的期望。我們不想放棄欣賞任何一個景點，於是我們要求大家一起去探索這城市的每一個角落。逛街中的我們，在每條街道，每吋空氣中，也留下我們的聲音。我們欣賞所有觀光景點。而且還有一點，每當我們到處遊覽，我們總會在商店的玻璃櫥窗，看著大家的倒影在凝望著大家。入夜後我們流連忘返，這也代表了我們在城市的旅程差不多結束了。當我們離開這城市時，我們知道我們很快會再回來。這個城市是屬於我們的。

APPENDIX C.2

We are interested in how people form impressions of others based on bits of information they receive. To understand this we ask people to imagine certain situations and have them form impressions of strangers based on limited information about them.

Elderly Condition

1. A 63-year old bank employee who worked as a teller usually had long queues in front of his counter. He was always very careful to check the cash that was being deposited or withdrawn by each customer to make sure there were no errors.

2. A 63-year old airline employee who worked at the airport check-in counter usually had long queues in front of his counter. He was always very careful to check the names of passengers who were checking in to make sure there were no errors.

Control Condition

1. A bank employee who worked as a teller usually had long queues in front of his counter. He was always very careful to check the cash that was being deposited or withdrawn by each customer to make sure there were no errors.

2. An airline employee who worked at the airport check-in counter usually had long queues in front of his counter. He was always very careful to check the names of passengers who were checking in to make sure there were no errors.

Table 1

Mean difference (and standard deviations) between extent to which participants thought about friends and family and the extent to which they thought about themselves as a function of cultural mindset

Dependent Var.	*Cultural Mindset*	*M* (*SD*)	*CI [Low range, High range]*
Extent to which subjects thought about friends and family			
Experiment 1	Individualist	-.78[a] *(2.13)*	95% CI [-1.25, -.30]
	Collectivist	.46[b] *(2.33)*	95% CI [-.05, .98]
Experiment 3	Individualist	-1.06[a] *(2.29)*	95% CI [-1.69, -.42]
	Collectivist	-.28[b] *(1.81)*	95% CI [-.78, .22]
Experiment 4	Individualist	-1.55[a] *(2.84)*	95% CI [-2.23, -.87]
	Collectivist	-.31[b] *(2.85)*	95% CI [-1.01, .38]
Experiment 5	Individualist	-1.81[a] *(3.02)*	95% CI [-2.48, -1.76]
	Collectivist	.04[b] *(1.99)*	95% CI [-.41, .48]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable.

Table 2

Mean response (and standard deviations) to thought listings as a function of cultural mindset and prime – Experiment 1

Dependent Var.	*Cultural Mindset*	*Stereotype*	*M* (*SD*)	*CI [Low range, High range]*
Thought-listings (Traits)				
	Individualist	Age-related prime	1.78[a] *(.84)*	95% CI [1.51, 2.04]
		Control	1.30[b] *(.99)*	95% CI [.98, 1.62]
	Collectivist	Age-related prime	.89[b] *(.97)*	95% CI [.58, 1.21]
		Control	1.09[b] *(.71)*	95% CI [.86, 1.31]
Thought-listings (Behaviors)				
	Individualist	Age-related prime	.50[a] *(.49)*	95% CI [.34, .66]
		Control	.51[a] *(.55)*	95% CI [.34, .69]
	Collectivist	Age-related prime	1.36[b] *(.71)*	95% CI [1.13, 1.59]
		Control	.30[a] *(.46)*	95% CI [.15, .45]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable. Means with similar superscripts do not significantly differ.

Table 3

Mean response times (and standard deviations) to trait and non-trait words as a function of cultural mindset and prime—Experiment 2

Dependent Var.	*Cultural Mindset*	*Stereotype*	*M* (*SD*)	*CI [Low range, High range]*
Trait words				
	Individualist	Elderly	532.98[b] *(42.98)*	95% CI [517.74, 548.22]
		Control	567.76[b] *(68.71)*	95% CI [542.10, 593.42]
	Collectivist	Elderly	599.31[a] *(159.46)*	95% CI [540.82, 657.80]
		Control	540.04[b] *(49.94)*	95% CI [522.04, 558.05]
Non trait words				
	Individualist	Elderly	686.92[b] *(114.67)*	95% CI [646.26, 727.59]
		Control	735.66[b] *(154.46)*	95% CI [677.98, 793.33]
	Collectivist	Elderly	771.30[b] *(256.18)*	95% CI [677.33, 865.26]
		Control	705.91[b] *(127.02)*	95% CI [660.12, 751.71]
Attitudes towards elderly				
	Individualist	Elderly	3.34[a] *(.33)*	95% CI [3.23, 3.46]
		Control	3.36[a] *(.27)*	95% CI [3.27, 3.47]
	Collectivist	Elderly	3.56[a] *(.33)*	95% CI [3.43, 3.68]
		Control	3.48[a] *(.25)*	95% CI [3.39, 3.57]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable. Means with similar superscripts do not significantly differ. (Analyses using log transformed data yielded similar results.)

Table 4

Mean response times to trait-related behaviors as a function of cultural mindset and priming conditions—Experiment 3

Dependent Var.	*Cultural Mindset*	*Stereotype*	*M* (*SD*)	*CI [Low range, High range]*
Self-related behaviors				
	Individualist	Elderly	1855.77[b] *(553.63)*	95% CI [1632.15, 2079.39]
		Control	1701.04[b] *(457.42)*	95% CI [1520.10, 1881.99]
	Collectivist	Elderly	1559.92[a] *(368.84)*	95% CI [1410.94, 1708.90]
		Control	1909.05[b] *(651.52)*	95% CI [1651.32, 2166.78]
Self-unrelated behaviors				
	Individualist	Elderly	2102.67[b] *(1003.78)*	95% CI [1696.24, 2507.11]
		Control	1816.90[b] *(530.54)*	95% CI [1607.03, 2026.78]
	Collectivist	Elderly	1722.83[b] *(465.92)*	95% CI [1534.64, 1911.01]
		Control	2042.94[b] *(526.98)*	95% CI [1834.48, 2251.41]
Self-referent behaviors				
	Individualist	Elderly	1722.10[b] *(465.59)*	95% CI [1534.05, 1910.16]
		Control	1660.09[b] *(523.14)*	95% CI [1453.14, 1867.03]
	Collectivist	Elderly	1625.30[b] *(374.03)*	95% CI [1474.23, 1776.37]
		Control	1826.95[a] *(377.28)*	95% CI [1713.70, 2012.20]
Stereotype-unrelated behaviors				
	Individualist	Elderly	1749.83[a] *(456.65)*	95% CI [1565.39, 1934.28]
		Control	1521.84[b] *(307.46)*	95% CI [1400.21, 1643.46]
	Collectivist	Elderly	1452.90[b] *(261.85)*	95% CI [1347.14, 1558.67]
		Control	1695.85[a] *(318.88)*	95% CI [1569.70, 1821.99]
Attitudes towards elderly				
	Individualist	Elderly	3.57[a] *(.37)*	95% CI [3.42, 3.72]
		Control	3.62[a] *(.48)*	95% CI [3.43, 3.81]
	Collectivist	Elderly	3.69[a] *(.39)*	95% CI [3.53, 3.85]
		Control	3.66[a] *(.33)*	95% CI [3.53, 3.79]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable. Means with similar superscripts do not significantly differ. (Analyses using log transformed data yielded similar results.)

Table 5

Mean response (and standard deviations) to justification of group's reaction, impression of co-worker, attribution of behavior and thought-listings as a function of cultural mindset and priming conditions—Experiment 4

Dependent Var.	*Cultural Mindset*	*Stereotype*	*M* (*SD*)	*CI [Low range, High range]*
Justification of group's reaction				
	Individualist	Elderly	7.77[a] *(2.27)*	95% CI [6.99, 8.55]
		Control	8.29[a] *(1.88)*	95% CI [7.64, 8.95]
	Collectivist	Elderly	8.15[a] *(2.99)*	95% CI [7.10, 9.19]
		Control	8.39[a] *(2.11)*	95% CI [7.65, 9.14]
Impression of co-worker				
	Individualist	Elderly	3.71[b] *(1.56)*	95% CI [3.18, 4.25]
		Control	4.03[b] *(1.29)*	95% CI [3.58, 4.48]
	Collectivist	Elderly	5.24[a] *(3.16)*	95% CI [4.13, 6.34]
		Control	4.09[b] *(2.54)*	95% CI [3.19, 4.99]
Attribution of behavior				
	Individualist	Elderly	5.03[a] *(2.14)*	95% CI [4.30, 5.76]
		Control	5.15[a] *(2.45)*	95% CI [4.29, 6.00]
	Collectivist	Elderly	6.03[a] *(3.22)*	95% CI [4.90, 7.15]
		Control	5.36[a] *(3.36)*	95% CI [4.17, 6.56]
Thought-listings (Traits)				
	Individualist	Elderly	.69[b] *(.88)*	95% CI [.39, .98]
		Control	.26[a] *(.50)*	95% CI [.09, .44]
	Collectivist	Elderly	.18[a] *(.58)*	95% CI [-.02, .38]
		Control	.35[a] *(.54)*	95% CI [.16, .54]
Thought-listings (Behaviors)				
	Individualist	Elderly	.29[a] *(.46)*	95% CI [.13, .44]
		Control	.59[a] *(.56)*	95% CI [.39, .78]
	Collectivist	Elderly	1.01[b] *(.74)*	95% CI [.76, 1.27]
		Control	.33[a] *(.46)*	95% CI [.17, .49]
Difference score (Behaviors-Traits)				
	Individualist	Elderly	-.40[a] *(1.15)*	95% CI [-.79, -.01]

	Control	.32[b] *(1.05)*	95% CI [.01, .63]
Collectivist	Elderly	.84[b] *(1.05)*	95% CI [.47, 1.20]
	Control	-.02[a] *(.78)*	95% CI [-.29, .26]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable. Means with similar superscripts do not significantly differ.

Table 6

Mean response (and standard deviations) to intent to shift employee, intent to reward employee and thought-listings as a function of cultural mindset and priming conditions—Experiment 5

Dependent Var.	*Cultural Mindset*	*Stereotype*	*M* (*SD*)	*CI [Low range, High range]*
Intent to shift employee				
	Individualist	Elderly	4.23[a] *(2.40)*	95% CI [3.46, 4.99]
		Control	4.80 [a] *(1.94)*	95% CI [4.18, 5.42]
	Collectivist	Elderly	4.95[a] *(2.50)*	95% CI [4.15, 5.75]
		Control	3.95[b] *(2.15)*	95% CI [3.26, 4.64]
Intent to reward employee				
	Individualist	Elderly	5.34[a] *(1.89)*	95% CI [4.73, 5.94]
		Control	5.20[a] *(1.35)*	95% CI [4.77, 5.63]
	Collectivist	Elderly	5.06[a] *(1.88)*	95% CI [4.46, 5.66]
		Control	5.06[a] *(1.74)*	95% CI [4.50, 5.62]
Thought-listings (Traits)				
	Individualist	Elderly	1.60[a] *(1.01)*	95% CI [1.28, 1.92]
		Control	1.11[b] *(1.01)*	95% CI [.79, 1.44]
	Collectivist	Elderly	.61[b] *(.70)*	95% CI [.39, .84]
		Control	.91[b] *(.78)*	95% CI [.66, 1.16]
Thought-listings (Behaviors)				
	Individualist	Elderly	.60[b] *(.53)*	95% CI [.43, .77]
		Control	.51[b] *(.63)*	95% CI [.31, .71]
	Collectivist	Elderly	1.35[a] *(.59)*	95% CI [1.16, 1.54]
		Control	.51[b] *(.59)*	95% CI [.32, .70]

Note. Means with dissimilar superscripts significantly differ at $p < .05$ for each dependent variable. Means with similar superscripts do not significantly differ.