

Cultural Variation in Correspondence Bias: The Critical Role of Attitude Diagnosticity of Socially Constrained Behavior

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Upon observing another's socially constrained behavior, people often ascribe to the person an attitude that corresponds to the behavior (called the *correspondence bias* [CB]). The authors found that when a socially constrained behavior is still diagnostic of the actor's attitude, both Americans and Japanese show an equally strong CB. A major cultural difference occurred when the behavior was minimally diagnostic. Demonstrating their persistent bias toward dispositional attribution, Americans showed a strong CB. But Japanese did not show any CB (Study 1). Furthermore, a mediational analysis revealed that this cross-cultural difference was due in part to the nature of explicit inferences generated online during attitudinal judgment (Study 2). Implications for the cultural grounding of social perception are discussed.

Understanding how the social perceiver “goes beyond” (Bruner, 1957) a given behavior (e.g., someone is arguing for legalized abortion) to either arrive at or refrain from dispositional attributions (e.g., the person has a prochoice attitude) is one of the most actively debated issues in the person-perception literature (Gilbert & Malone, 1995; Heider, 1958; Jones, 1979; Ross, 1977). Although this literature has focused nearly exclusively on European Americans, in more recent years there is a significant increase of interest in possible cross-cultural variations in dispositional attribution (for reviews, see Choi, Nisbett, & Norenzayan, 1999; A. P. Fiske, Kitayama, Markus, & Nisbett, 1998; Kitayama, 2000; Nisbett, Peng, Choi, & Norenzayan, 2001). Drawing on this recent development, this article addresses cross-cultural variations in one cognate phenomenon called *correspondence bias* (CB).

Culture and CB

CB refers to a tendency of the social perceiver to infer a disposition of another person that corresponds to his or her overt behavior even when the behavior is socially constrained. One premier experimental paradigm used to demonstrate CB involves an inference of the true attitude of someone who composed an essay that states a pro or anti position on a certain issue. In an original demonstration of CB, Jones and Harris (1967) had American college students infer the true attitude of a hypothetical person

who allegedly wrote an essay that either supported or denounced Fidel Castro in Cuba. In a free-choice condition, the participants had been informed that the protagonist wrote the essay after having chosen the stated position by himself. Not surprisingly, in this condition the participants ascribed to the protagonist a strong attitude that corresponded to the stated position. In a no-choice condition, the participants had been informed that the protagonist was assigned one or the other position by a coach of a debating team. They had been told that the protagonist had no choice. Despite the fact that in this no-choice condition there was an obvious social constraint on the protagonist's behavior, the participants still ascribed to the protagonist an attitude that corresponded to the stated position. Thus, they failed to take into full account the effect of social constraint (Gilbert & Malone, 1995; Jones, 1979).

Although CB is extremely robust in North America, the cross-cultural generality of the bias may be disputed. Specifically, evidence indicates that Asians are more likely to pay attention to contextual stimuli than North Americans. For example, Masuda and Nisbett (2001) presented both Americans and Japanese with a brief video clip of a fish swimming under water. In the background of the fish, a number of smaller stimuli, such as little underwater creatures, seaweeds, and bubbles of varying size and shape, were shown. The participants were to narrate a story while watching the video scene. The results showed a clear cultural bias in attention, with Japanese more likely than Americans to refer to the contextual stimuli. Further, a surprise recognition test revealed that the Japanese had encoded the fish along with the stimuli presented in its background. Thus, performance in the recognition test was facilitated when the context in which the test fish had originally been embedded was reinstated; but it was impaired when the fish was presented in a new context. The effect of context on recognition memory was negligible for Americans. Along with other recent evidence (e.g., Ishii, Reyes, & Kitayama, in press; Kitayama, Duffy, Kawamura, & Larsen, in press; Kitayama & Ishii, 2002), this finding indicates that in an attitude inference paradigm, Asians pay more attention to social constraint (which

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constitutes contextual information in the attitude attribution paradigm) than Americans do.

Furthermore, evidence is mounting that Asians and Americans differ in the type of reasons they produce for social behavior. Specifically, whereas North Americans generate more dispositional inferences in explaining a behavior of another person, Asians generate more situational inferences (J. G. Miller, 1984; Morris & Peng, 1994). A similar cultural difference can be found even in explanations of animal behaviors. Morris and Peng (1994) had American and Chinese participants observe animated images of a school of fish. In accounting for the behavior of one of the fish, Americans referred more to factors internal to the fish than to factors external to it (e.g., the actions of the other fish). In contrast, Chinese referred more to the external factors. All in all, then, in attitudinal judgment, Asians are more likely than Americans to take situational constraint into account and, accordingly, CB may be expected to be weaker for Asians than for Americans.

Is there any empirical evidence that CB is in fact weaker in Asia than in North America? Several studies have applied the original no-choice procedure of the Jones and Harris (1967) study to Asian populations. Surprisingly, these studies have found that CB is no weaker in Asia than in North America. Thus, Krull et al. (1999) administered the standard no-choice procedure and found an equally strong CB in both the United States and China. Using essentially the same procedure, Toyama (1990, 1998, 1999) and Choi and Nisbett (1998, Study 1) also found a strong CB in Japan and Korea, respectively. Hence, there is an emerging consensus that CB under standard no-choice conditions is as pronounced in Asia as in North America (e.g., Choi & Nisbett, 1998; Krull et al., 1999). Here lies an interesting paradox. If Asians are more likely to spontaneously generate situational causal inferences, why is CB no weaker for them than for Americans?

To resolve the paradox, we propose that the predicted cross-cultural difference in CB can happen, but that it does so only under certain conditions. The goal of the current work was to find conditions under which Americans do show a reliable CB, but Asians no longer do so. In pursuing the same goal, Choi and Nisbett (1998) focused on one of two central constituents of the experimental paradigm, namely, social constraint. In particular, they suggested that the predicted cross-cultural difference can happen once social constraint is made salient. In the present work, we take an alternative track, with a focus on the other central constituent of the paradigm, namely, stimulus essay. In particular, we evoke the notion of *attitude diagnosticity* of essay.

Attitude Diagnosticity

Attitude diagnosticity refers to a property of socially constrained behavior (e.g., which essay one wrote and how it was written) that suggests a true attitude of the actor. For example, essay content may be highly diagnostic of the writer's attitude if it suggests his or her willingness to defend the essay position. It is reasonable to assume that an essay becomes more diagnostic of the attitude of the author if it is long, persuasive, well composed, and thus seemingly written willingly with enthusiasm (A. G. Miller, Ashton, & Mishal, 1990). There is reason to believe that this variable plays quite an important role in the standard no-choice condition of the attitude attribution paradigm.

Typically in the no-choice condition, participants are told that the protagonist was not given any choice of the position to defend in the essay he or she wrote. Thus, the behavior of the protagonist is clearly constrained. Of importance, however, the protagonist's behavior is not fully determined by the constraint. Among others, it is up to the protagonist to select different arguments and expressions in accordance with his or her willingness to endorse the assigned position. Accordingly, in the no-choice condition, essay content is likely to be quite diagnostic of the protagonist's attitude. In all the cross-cultural studies, researchers have used essays that are often fairly long, reasonably coherent, and persuasive. For example, essays used by Choi and Nisbett (1998) contained several different arguments in favor of one or the other position and, furthermore, they were long enough (approximately 220 words long) to suggest that the protagonist willingly wrote it. It stands to reason, then, that participants in the past cross-cultural studies, both Asians and Americans, perceived a considerable willingness of the protagonist to defend the assigned position, which in turn may have surpassed any effects of either the relative sensitivity of Asians for situational constraint or the relative propensity of Americans for making dispositional attributions.

In support of this analysis, evidence indicates that Asians are much less likely to show a CB than do Americans, especially when the behavior of the protagonist does not suggest that he or she is willing to endorse the assigned position (i.e., when the attitude diagnosticity of the behavior is low). Following earlier studies by A. G. Miller, Gilbert, and their colleagues (e.g., A. G. Miller, 1976; Gilbert & Jones, 1986), Masuda and Kitayama (2002) had participants observe a protagonist who was reading an essay that had been written by someone else. Because the essay was not written by the protagonist, it offered no evidence for her attitude. Replicating earlier studies conducted in North America, Masuda and Kitayama (2002) found that American participants showed a reliable CB even under these conditions. This constitutes very strong evidence for a cognitive bias that favors dispositional attribution. In contrast, however, Japanese participants showed no CB under these conditions. In two studies to be reported below, we used a standard no-choice manipulation where a protagonist allegedly wrote an essay to defend a preassigned position. To minimize any cue of the protagonist's willingness to defend the assigned position, we reduced the length and persuasiveness of the stimulus essays. We expected that even under these conditions, Americans would show a reliable CB. As summarized by Jones (1979), past American studies (e.g., Schneider & Miller, 1975) have found that "within wide limits, the quality, strength, or persuasiveness of the essay has little effect on observer attributions" (p. 110). In contrast, in these conditions, we expected that Japanese would show little or no CB.

Present Research

The main hypothesis of the current work was that the cross-cultural difference in CB (with Japanese showing less CB than Americans) is moderated by the attitude diagnosticity of socially constrained behavior. We predicted, first, that when behavior is highly diagnostic of the protagonist's strong attitude, CB should happen regardless of cultures. We also predicted, however, that when behavior is minimally diagnostic, there should be a marked cross-cultural difference. That is, under this condition, CB should

be sizable for Americans, but it would be negligible for Japanese. In our experiments reported below, we first seek to establish a reliable cross-cultural difference in CB (Study 1), and then move on to examine specific mechanisms underlying this cross-cultural difference (Study 2).

Study 1

Method

Participants. Forty-nine Japanese undergraduates at a Japanese university (Kyoto University, Kyoto, Japan; 25 males and 24 females) and 58 American undergraduates (29 males and 29 females) who were temporarily studying in Japan as part of a foreign exchange program at another Japanese university (Kansai Gaidai University, Osaka) were tested. The participants received 500 yen (approximately \$4.50) for their participation. Preliminary analysis suggested no significant effects that involved gender, so this variable was dropped in the following analyses.

Procedure. All participants were run in small groups of up to 4 individuals. When participants arrived in a testing room, they were told that the study involved inference of another person's attitude. They were then handed a questionnaire. The entire course of the study was paced by the experimenter. On the cover page of the questionnaire, the participants were explained that their task was to read an essay on the death penalty that was written by a student for a seminar at a university and that they were to infer the true attitude of the student on the issue at hand. An essay was presented on the next page of the questionnaire. The essay was either in favor of or against the death penalty. Further, in the high-diagnostics condition, the essay was relatively long (approximately 240 words) and rendered quite persuasive. Both pro- and antiessays in this condition were modeled after the essays used by Choi and Nisbett (1998). In the low-diagnostics condition, the essay was relatively short (approximately 65 words) and rendered quite unpersuasive by eliminating the major arguments presented in the high-diagnostics essays. The four essays used in this study are given in the Appendix.

The essay was followed on the next page by a brief description of social constraint on the essay writer. Specifically, all participants were explained in a brief paragraph that the writer of the essay had been asked to write an essay supporting or opposing a given political position by an instructor of a political science seminar. The paragraph read as follows:

Dr. Wallace is teaching a course on international politics at a Mid-western university. In his class, students discuss a variety of topics and issues every week. Typically, Dr. Wallace solicits opinions about the topics from the students. In this week's class, the topic was capital punishment. Dr. Wallace asked Steve to write an essay supporting (or opposing, depending on the essay condition) capital punishment. Steve agreed to do so and wrote the essay presented on the previous page.

We presented the essay before the social constraint for a reason. Evidence indicates that CB is stronger when the two stimuli are presented in this order than when they are presented in the opposite order (Jones, Riggs, & Quattrone, 1979). The current procedure worked against our primary hypothesis that CB should be very weak when Japanese are tested in the low-diagnostics condition.

On the subsequent pages, several attitudinal questions were given. Most relevant for the present purposes are two questions that pertain to the essay writer's real attitude. First, the participants were asked to estimate the real attitude of the essay writer on capital punishment on a 15-point rating scale (1 = *very strongly opposing*, 15 = *very strongly supportive*). Second, they were asked to indicate what attitude the essay writer would express if he or she had a chance to do so freely. The participants also estimated the attitude of the average student of their university and, finally, they reported their own attitude. Next, the participants were asked how much constraint or

freedom they thought the protagonist had when he or she wrote the essay (1 = *strongly constrained*, 7 = *completely free*). Finally, they were asked how persuasive they found the protagonist's essay to be (1 = *not persuasive at all*, 7 = *very persuasive*).

Results and Discussion

Manipulation checks. A $2 \times 2 \times 2$ analysis of variance (ANOVA), with three between-subjects variables (attitude diagnosticity, essay direction, and culture), was performed on the persuasiveness ratings. This analysis showed that the essays in the high-diagnostics condition were in fact perceived to be more persuasive than the ones in the low-diagnostics condition ($M_s = 3.62$ vs. 2.75), $F(1, 99) = 7.42$, $p < .01$. This effect was not qualified by either essay position or culture. We also examined the perceived freedom of the essay writer (or the perceived constraint on him). Somewhat unexpectedly, a greater amount of freedom of the protagonist or lesser constraint on him was perceived by Americans than by Japanese ($M_s = 4.17$ vs. 3.18), $F(1, 99) = 8.37$, $p < .005$. This variable was thus used as a covariate in the analyses to follow.

Attitude judgment. To control for the effect of perceived constraint, we first reversed the ratings of inferred attitudes in the antiessay condition to yield an index of correspondent inference. This index was submitted to a $2 \times 2 \times 2$ analysis of covariance (ANCOVA) with three between-subjects variables (attitude diagnosticity, essay direction, and culture) and a covariate (perceived constraint). We predicted that CB should be weaker among Japanese than among Americans only when the attitude diagnosticity of essay was minimal. This prediction would receive support with a significant interaction between culture and attitude diagnosticity.

We first analyzed the real attitude measure. Overall, there was a highly significant effect of the covariate, $F(1, 98) = 8.93$, $p < .0001$. Inspection of correlations in different conditions suggested that in all cases, more correspondent attitudes were inferred as lesser constraint was perceived. Furthermore, the ANCOVA showed a marginally significant main effect of culture, showing the general tendency of Americans to draw stronger correspondent inferences than Japanese, $F(1, 98) = 3.82$, $p < .06$. Of importance, the predicted interaction between culture and attitude diagnosticity proved significant, $F(1, 98) = 6.23$, $p < .02$. For Americans, correspondent inference was strong regardless of attitude diagnosticity; but for Japanese, it was much weaker if the essays were not diagnostic of the writer's attitude. Essentially the same pattern was found for the free speech measure. As in the analysis of the real attitude measure, the effect of the covariate (perceived constraint) was highly significant, $F(1, 98) = 17.89$, $p < .0001$. Moreover, the culture main effect proved significant, $F(1, 98) = 4.82$, $p < .05$, and so did the Culture \times Attitude Diagnosticity interaction, $F(1, 98) = 3.85$, $p = .05$. Of importance, virtually identical findings were obtained when the same analysis was done without controlling for the cross-cultural difference in perceived constraint.

The pertinent means are shown in Table 1. One should notice that the correspondent inference index in the antiessay conditions was reversed to show inferred attitudes on the original metric. CB is indicated by a significant difference in inferred attitude between the proessay condition and the antiessay condition. This difference is plotted in Figure 1. If the difference is significantly greater than zero, it would provide evidence for CB. The statistical tests of the differences between the two essay position conditions are summa-

Table 1
Mean Attitudes Attributed to the Protagonist by Japanese and American Participants as a Function of Essay Direction and the Essay Diagnosticity (i.e., Long-Persuasive Vs. Short-Persuasive) Under the Standard No-Choice Conditions

Essay content	Japanese		Americans	
	Real attitude	Free speech	Real attitude	Free speech
Long-persuasive essay condition				
Proessay condition	11.53 (3.59)	10.66 (3.93)	11.60 (3.62)	10.10 (3.94)
Antiessay condition	4.52 (3.71)	5.25 (3.90)	4.58 (3.70)	4.29 (3.00)
<i>t</i> (98)	5.86	4.06	6.43	4.78
<i>p</i>	< .001	< .001	< .001	< .001
Short-unpersuasive essay condition				
Proessay condition	9.27 (2.88)	9.31 (3.59)	10.82 (3.47)	10.63 (3.70)
Antiessay condition	7.02 (3.06)	7.50 (4.01)	3.30 (2.62)	3.31 (2.68)
<i>t</i> (98)	1.84	1.33	6.66	5.81
<i>p</i>	<i>ns</i>	<i>ns</i>	< .001	< .001

Note. Means shown here were obtained after the effect of perceived constraint was statistically controlled (see the text for the steps taken in the statistical control). Standard deviations shown in parentheses are associated with original (i.e., unadjusted) means. Values of *t*s and *p*s are for comparisons between the proessay means and the antiessay means in the respective conditions.

alized in Table 1. As can be seen, Americans showed a very strong CB regardless of attitude diagnosticity of the essays. In contrast, Japanese showed an equally strong CB when the essays were diagnostic (i.e., they were long and persuasive). When the essays were low in diagnosticity (i.e., they were short and unpersuasive), however, CB was very weak and statistically nonsignificant.¹ Finally, we found no systematic effects of the experimental variables on either the attitudes estimated for the average student or the participants' report of their own attitudes.

Study 2

In Study 1, we predicted and found that when the focal behavior was diagnostic of the protagonist's attitude, both Americans and

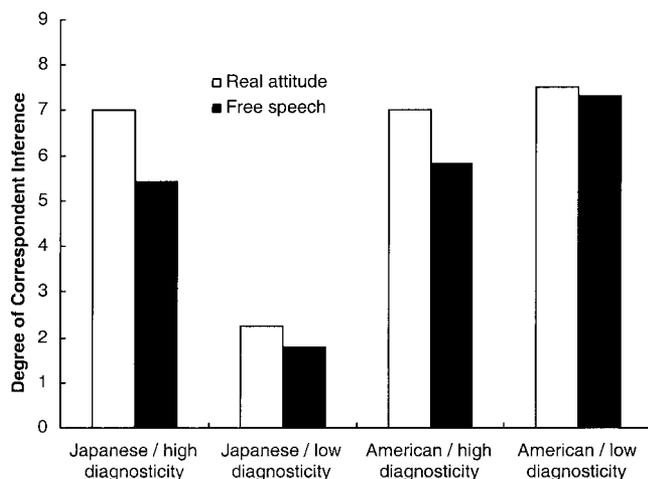


Figure 1. Correspondence bias shown by Japanese and Americans under the long-persuasive essay condition and the short-unpersuasive essay condition (Study 1).

Japanese showed an equally strong CB. In contrast, when the behavior was minimally diagnostic, there was a sizable cross-cultural difference in CB. Whereas Americans showed a reliable CB even under these conditions, Japanese showed little or no such effect. Further, the near absence of CB in Japan under these conditions is quite replicable (see Footnote 1). Now that the cross-cultural difference in CB has been established, the next step would be to explore mechanisms underlying this difference.

One possible mechanism concerns explicit causal inferences generated during attitudinal judgment. We have hypothesized that Japanese are more likely than Americans to generate situational causal inferences during attitudinal judgment. To determine whether such inferences would account for the cross-cultural difference in CB, we used a thought-listing task to measure the nature of inferences generated during attitudinal judgment (e.g., Petty & Cacioppo, 1986). Specifically, Japanese would produce more situational inferences than would Americans. We expected that this cross-cultural difference in spontaneous causal inference would

¹ We conducted three additional studies to replicate the key finding of Study 1, namely, that CB can become very weak for Japanese even when a standard no-choice procedure is used, as long as the essay is made minimally diagnostic of the protagonist's willingness to endorse the assigned position. A total of 130 undergraduates at Kyoto University were tested. Among them, 31 (17 males and 14 females), 69 (46 males and 23 females), and 30 undergraduates (22 males and 8 females) participated in Replications 1, 2, and 3, respectively. The procedure was identical to the procedure for the low attitude-diagnosticity condition of Study 1. The essay topics in Replications 1, 2, and 3 were environmental protection, the American military base in Okinawa, Japan, and capital punishment, respectively. In all the three replications, CB was negligible. When all data were analyzed within an ANOVA with the topic as a repeated (fixed) measure, the main effect of essay content failed to be significant both in the real attitude measure ($M_s = 8.54$ vs. 7.73), $F(1, 118) = 2.75$, $p > .10$, and in the free speech measure ($M_s = 8.21$ vs. 7.75), $F(1, 118) = 1.19$, $p > .25$.

account, in part, for the cross-cultural difference in CB. We tested this prediction by using a mediational analysis (Baron & Kenny, 1986). We expected that the cross-cultural difference in CB should be considerably attenuated once the cross-cultural difference in spontaneous causal inference was statistically controlled.

Furthermore, we manipulated the degree to which explicit causal inferences are likely to be generated. For this purpose, we compared two forms of judgment that differ in this particular respect. Hastie and Park (1986) distinguished between two broad types of social judgment (see also Kitayama & Burnstein, 1989). One is *online*, where individuals form a judgment about someone else while learning about the person. All existent studies on CB, including those reported so far in this article, use this procedure. The other is *memory-based*, where individuals form a judgment about someone else by remembering what they know about the person.

The key assumption is that online judgments and memory-based judgments are no different except for one critical point: Only memory-based judgments involve memory retrieval, which consumes a sizable chunk of cognitive resources that can otherwise be used to generate explicit inferences. Put differently, as noted by Hastie and Park (1986), “memory-based judgments are usually more effortful than on-line judgments” (p. 262). In support of this analysis, both Hastie and Park (1986) and Kitayama and Burnstein (1989) showed that the relationship between judgment and memory is negligible when the judgment is online, but it is substantial when the judgment is memory based. The reason is that whereas the online judgment is based on a large number of spontaneous inferences generated while the judgment is made, the memory-based judgment is based solely on the remembered materials because no cognitive resources are left to generate any explicit inferences.

Our prediction was that in the online judgment condition, explicit causal inferences are likely to be generated and, therefore, the cross-cultural difference in CB that has been observed in this condition should be accounted for by the nature of these inferences. In the memory-based condition, in contrast, we hypothesized that little or no such inferences would be generated. Accordingly, we expected that in the memory-based judgment condition, the cross-cultural difference in CB might vanish.

Finally, the hypothesis that individuals are more likely to generate explicit inferences if the judgment is online than if it is memory-based entails an additional implication. We expected that these inferences are more likely to be situational for Japanese and to be dispositional for Americans. Nevertheless, it is likely that Americans would generate some situational inferences. The situational inferences, once generated, are likely to attenuate CB. Conversely, CB should become stronger when such inferences are suppressed. Consistent with this analysis, Gilbert, Pelham, and Krull (1988) have provided evidence that when a cognitive load is imposed on the perceiver during attitude judgment, there results a reliable increase of CB. It is possible that the cognitive load suppressed explicit inferences. This line of analysis suggests that CB should be larger in the memory-based judgment condition than in the online judgment condition. We expected that this effect would occur for both Japanese and Americans.

Method

Participants. Fifty American undergraduates (20 males and 30 females) and 60 Japanese undergraduates (20 males and 40 females) partic-

ipated in the study. The Americans were all undergraduates temporarily studying at Kansai Gaidai University, Osaka, as part of its foreign exchange program. The Japanese were all undergraduates at both this university and another university (Kyoto University, Kyoto). Participants received 500 yen (approximately \$4.50) for their participation. They were tested either individually or in groups of two. Those in the same session were randomly assigned to either one of the two judgment conditions.

Procedure. The procedure for the online judgment condition was identical to the procedure of Study 1. A short and unpersuasive essay that either supported or opposed capital punishment—the one used in the low-diagnosticity condition of Study 1—was used. Participants assigned to the memory-based condition were told that the study was about sentence memory and their task was to memorize each sentence of a short essay. They were then given 50 s (the length of time equivalent to that given to the participants in the online condition to read the essay) to read and commit to their memory an essay that either supported or opposed capital punishment. At this point, the participants were handed a questionnaire. On the cover of the questionnaire, the participants were explained that the next study involves inference of another person’s attitude. On the next page, the participants were told that the essay they just memorized was written by an undergraduate for a seminar course, and they were then given the social constraint information. The rest of the questionnaire was identical to the one used in the online judgment condition.

In both judgment conditions, the participants subsequently responded to the attitudinal measures (real attitude, free speech, attitude of average student, and own attitude). They were then asked to remember what they thought about while making a judgment on the protagonist’s real attitude. They listed all thoughts that occurred to them during the judgment. Next, the participants were asked how much constraint or freedom they thought the protagonist had when he or she wrote the essay (1 = *strongly constrained*, 7 = *completely free*). Finally, they were asked how persuasive they found the protagonist’s essay (1 = *not persuasive at all*, 7 = *very persuasive*).

Results and Discussion

Manipulation checks. We first examined whether the social constraint on the essay writer was similarly recognized by Japanese and American participants. The means for the perceived constraint/freedom item were no different between the two groups, with an overall mean of 3.67 ($F < 1$). We also tested whether Japanese and American participants perceived the essay to be equally persuasive. Unexpectedly, Japanese found the essay to be somewhat more persuasive than Americans ($M_s = 3.9$ vs. 3.1), $F(1, 94) = 5.47, p < .05$. Because CB can be expected to be stronger as the essay is perceived to be more persuasive, the cross-cultural difference in the perceived persuasiveness of the essay worked against our hypothesis.

Attitude judgment. Mean attitude scores are summarized in Table 2. As in Study 1 and three replications that followed it (see Footnote 1), the scores were higher in the proessay condition than in the antiessay condition, thus indicating the general trend toward CB. Yet, the size of this effect varied widely as a function of the experimental variables. To facilitate comparisons, the difference between the proessay mean and the antiessay mean was computed separately in each condition. These differences are displayed in Figure 2. CB is indicated by significantly positive difference scores. The results of the proper statistical tests can be found in Table 2.

First, we predicted that in the online judgment condition, CB should be stronger for Americans than for Japanese. Consistent with this prediction, CB in the online judgment condition was

Table 2
Mean Attitudes Attributed to the Protagonist by Japanese and American Participants as a Function of Essay Content and the Mode of Judgment (i.e., Online Vs. Memory-Based) Under the Standard No-Choice Conditions

Essay content	Japanese		Americans	
	Real attitude	Free speech	Real attitude	Free speech
Online judgment condition				
Proessay condition	10.47 (2.97)	10.80 (3.08)	11.50 (4.01)	11.08 (3.53)
Antiessay condition	8.47 (4.75)	8.60 (4.60)	4.00 (2.48)	4.92 (3.25)
<i>t</i> (102)	1.57	1.68	5.36	9.18
<i>p</i>	<i>ns</i>	<i>ns</i>	< .001	< .001
Memory-based judgment condition				
Proessay condition	10.67 (3.22)	9.80 (3.43)	13.39 (1.66)	12.54 (2.33)
Antiessay condition	6.40 (5.00)	6.40 (5.21)	2.75 (2.60)	3.92 (3.09)
<i>t</i> (102)	3.34	3.47	7.60	9.76
<i>p</i>	< .01	< .01	< .001	< .001

Note. Standard deviations are shown in parentheses. Values of *ts* and *ps* are for comparisons between the proessay means and the antiessay means in the respective conditions.

substantial for Americans, but it was negligible for Japanese. Further, we predicted that the cross-cultural difference in CB might disappear in the memory-based condition. Unexpectedly, however, CB in the memory-based judgment condition was still stronger for Americans than for Japanese. We will return to this unexpected finding later. Finally, we also predicted that CB should be larger in the memory-based judgment condition than in the online judgment condition. This in fact was the case. Of importance, these findings can be found for both of the two attitude measures.

ANOVAs performed on the two attitude measures confirmed the foregoing observations. Thus, we found a highly significant main effect of essay content for both the real attitude measure, $F(1, 102) = 80.01$, $ps < .0001$, and the free speech measure, $F(1,$

102) = 51.33, $ps < .0001$. Further, the critical interaction between essay content and culture was also highly significant for both measures, $Fs(1, 102) = 18.93$ and 10.42 , $ps < .005$, respectively. Finally, the interaction between essay content and judgment mode reached statistical significance in the real attitude measure, $F(1, 102) = 3.92$, $p = .05$, but not in the free speech measure, $F(1, 102) = 1.66$, *ns*.

Mediating role of online thought. We hypothesized that online causal inferences would mediate the CB in the online judgment condition. Specifically, we first predicted that Japanese would show a greater situational focus than Americans in these inferences. Second, we also predicted that the different levels of thought situationality should in turn account for the cross-cultural difference in CB. To test these two predictions, the protocols were coded in terms of their content being (a) essay content only, (b) both essay content and social constraint, or (c) social constraint only. We then created an index of the situationality of the thought by assigning a score of 1 to those participants who focused only on essay content, 2 to those who focused on both essay content and social constraint, and 3 to those who focused only on social constraint. Because the vast majority of participants listed only a few thoughts, it was considered unrealistic to use any more elaborate coding schemes.

Our first prediction stated that thought situationality should be especially high when Japanese engage in online inferences. Data supported this prediction. As compared with the participants in the remaining three conditions (the online and memory-based conditions for Americans and the memory-based condition for Japanese), the Japanese in the online condition showed an especially high level of thought situationality ($Ms = 1.35$ vs. 1.83). The contrast representing this pattern (with a weight of 1 assigned to the former three conditions and a weight of -3 assigned to the last condition; Rosnow & Rosenthal, 1995) proved statistically significant, $t(102) = 4.39$, $p < .01$. Further, the former three conditions did not differ from one another (all $ps > .20$). This pattern is

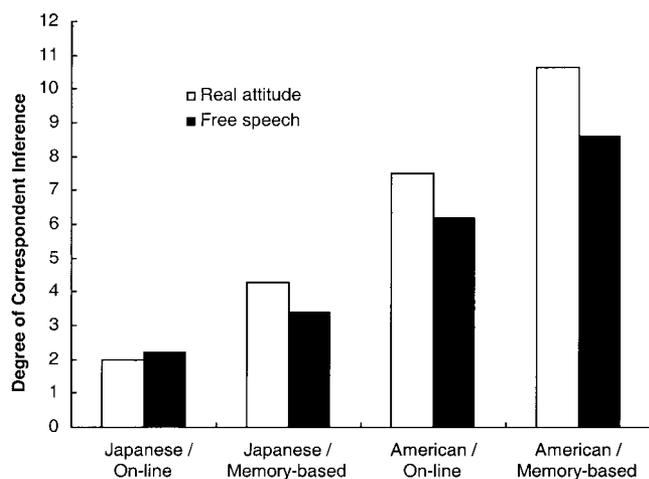


Figure 2. Correspondence bias shown by Japanese and Americans under the online judgment condition and the memory-based judgment condition (Study 2).

consistent with the hypothesis that Japanese (but not Americans) generate relatively more situational causal inferences in the online judgment condition (but not in the memory-based judgment condition).

Next, to test our second prediction about the mediating role of thought situationality, we developed a measure of correspondent inference that takes a higher score when the inferred attitude is congruous with the essay content. Thus, in the antiessay condition, attitude scores in both the real attitude and free speech measures were reversed. In the proessay condition, the original attitude scores were used. Finally, we performed regressions to determine (a) whether the situationality of thought would be predicted by culture and (b) whether the magnitude of CB would be predicted by culture after controlling for the effect of thought situationality. For the latter purpose, both the correspondent inference indices derived from the real attitude measure and the one derived from the free speech measure were used. The regressions were performed separately for the two judgment conditions.

The results from the online judgment condition are summarized in Figure 3A. As can be seen, culture significantly predicted thought situationality, with Japanese being more situational than Americans (M_s for the thought situationality index = 1.83 and 1.36 for Japanese and Americans, respectively). Further, thought situationality significantly predicted the magnitude of CB and, once this effect was taken into account, the culture effect was no longer reliable. This provides evidence that the cross-cultural difference in CB was mostly mediated by the nature of online thought (cf. Baron & Kenny, 1986).

The pattern was very different in the memory-based judgment condition (Figure 3B). Thought situationality was no longer reliably associated with the magnitude of CB; nor was thought situationality reliably predicted by culture (M_s for the thought situationality index = 1.43 and 1.24 for Japanese and Americans, respectively). Further, even after the effect of thought situationality was controlled for, the effect of culture on the magnitude of CB

was left highly significant. This suggests that the cross-cultural difference in CB observed in the memory-based judgment condition was not mediated by the nature of online thought. This is to be expected, insofar as such online thought was supposedly blocked in the memory-based judgment condition.

This invites an important question of what factors might have possibly mediated the cross-cultural difference we unexpectedly observed in the memory-based judgment condition. We suspect that this might have been due to a covert shift of attention. That is, even when explicit inferences were effectively blocked, attention might still be covertly shifted in culture-dependent fashion such that Japanese were more likely than Americans to direct their attention to social constraint (Kitayama et al., in press). With a further assumption that attended information carries a greater decision weight than unattended information (S. T. Fiske, 1980), this hypothesis seems to explain the finding. Of course, given the measure we had (i.e., thought-listing task) in this study, it is utterly impossible to demonstrate such subtle operation of attention. So at this point, the hypothesis is no more than a reasonable conjecture that has to be more carefully tested in future research.

General Discussion

The most important conclusion of the present work is that CB can be very weak in Japan even when a standard no-choice procedure is used, as long as the stimulus essay is made minimally diagnostic of the protagonist's attitude. In contrast, Americans showed a strong CB even when the stimulus essay was minimally diagnostic of the protagonist's attitude (Study 1). Moreover, this cross-cultural difference was mediated by inferences generated online during attitudinal judgment (Study 2). Quite aside from its significance in accounting for the cross-cultural difference in CB, this finding deserves an emphasis because it is the first evidence of its kind that conclusively connected the magnitude of CB to the nature of online inferences. Future work should seek direct evidence for another possible mechanism—attentional bias—in mediating the cross-cultural difference in CB. Finally, in Study 2, we compared an attitude judgment formed online—the kind of judgment that has so far been exclusively examined in the literature on CB—with a memory-based judgment. As predicted, CB became stronger for both Japanese and Americans in the memory-based judgment than in the online judgment, hence conceptually replicating earlier findings by Gilbert and colleagues (e.g., Gilbert et al., 1988). This finding is consistent with the notion that situational causal inferences that are supposedly generated during online attitudinal judgment suppress CB.

When Asians Show Less CB Than Americans

Although the current work highlighted attitude diagnosticity as a critical factor in moderating cross-cultural difference in CB, it would seem reasonable that another central constituent of the experimental paradigm (i.e., social constraint) also plays a key role. As mentioned earlier, Choi and Nisbett (1998) have shown this to be the case. To be more specific, these researchers hypothesized that within the standard no-choice procedure, social constraint was not sufficiently salient so that even Koreans failed to take it into full consideration. Alternatively, the participants in both cultures might have inferred that the researcher would be

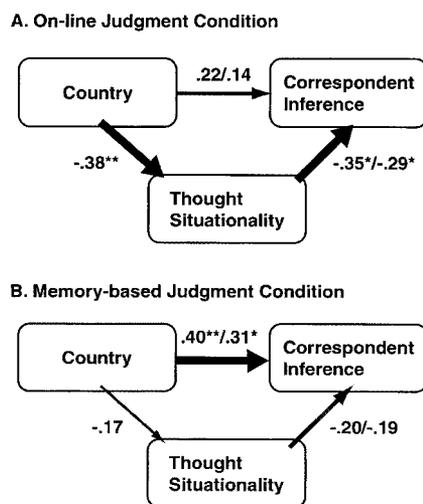


Figure 3. The mediating role of the situationality of online thought in the online judgment condition (A) and the memory-based judgment condition (B). When two numbers are given, they are based on the real attitude measure and the free speech measure, respectively. * $p < .05$. ** $p < .01$.

expecting them to make a heavier use of the essay information in attitude attribution (Wright & Wells, 1988; see Schwarz, 1994, for a review). Consistent with this analysis, in the standard no-choice condition, Choi and Nisbett found an equally strong CB in both the United States and Korea. However, when the salience of social constraint was increased by having the participants write an essay on a preassigned topic before making judgments about the protagonist's attitude (Snyder & Jones, 1974), CB was considerably attenuated in Korea, but not in the United States.

Both enhanced salience of social constraint and reduced attitude diagnosticity of essay may then be assumed to encourage individuals to discount essay content in attitude inference. Although these two factors are conceptually distinct, referring to separate, yet equally central constituents of the experimental paradigm, it would seem possible that the two are dynamically related. For example, nondiagnostic essays are often short and impoverished. As a consequence, attention might be drawn away from the essay to the attendant constraint. Alternatively, a highly salient constraint may reduce the perceived diagnosticity of the attendant essay. Future work may examine these intricate interactions between the two key moderators.

Regardless of what such an analysis may eventually reveal, the thesis that cross-cultural differences in CB depend on third variables (such as attitude diagnosticity or salience of social constraint) offers an important implication, namely, that CB is not either present or absent in any given culture. With some procedural modifications, even Americans fail to show CB (e.g., Fein, Hilton, & Miller, 1990; Krull, 1993; Quattrone, 1982) and, likewise, the existent Asian studies that use a standard no-choice manipulation indicate that Asians often show a reliable CB. Further, although the current work (see Footnote 1) consistently showed that when essays are minimally diagnostic of the essay writer's attitude, CB is statistically negligible, the bias is still discernible and, with a sufficiently large number of experimental subjects and statistical power, the bias may become statistically significant. Our claim, therefore, is not that CB is absent in Asia; it does exist and is clearly demonstrable. Nevertheless, evidence from the current work, in conjunction with the pertinent evidence marshaled by Choi and Nisbett (1998) and by Masuda and Kitayama (2002), strongly suggests that CB is considerably weaker in Asia.

Finally, a comment may be made on the specific manipulation used in the current work to reduce attitude diagnosticity of stimulus essays. We minimized attitude diagnosticity by reducing both the length and persuasiveness of stimulus essays. We believe that brief, relatively unconvincing statements are quite common in daily conversations. Indeed, in routine social interactions, writing any coherent essay is extremely unusual. Hence, we believe that the short and unconvincing essays used in the current work are more valid as an analogue of daily communications than the long and convincing essays that are routinely used in a vast majority of past studies on CB. It is all the more important, then, that we repeatedly found a reliable cross-cultural difference in CB with essays that have culturally valid and ecologically recurring forms (see Footnote 1). Future work should extend the current analysis to inferences of speech intent in conversations (see Sperber & Wilson, 1986, for an influential analysis on this issue).

Is CB Really a Cognitive Bias?

The current analysis bears some important implications for the normative status of CB as a cognitive error or bias. Specifically, it would seem reasonable to distinguish between two general types of CBs. One class of CBs occurs when a behavior is highly indicative of the protagonist's willingness to engage in the behavior. Under these conditions, CB can be accounted for in terms of a rational weighing of available information. Thus, for example, in the high-diagnosticity condition of Study 1, the protagonist allegedly did actually write a long and convincing essay. Hence, he was seemingly quite willing to write the essay even though the position he was taking was preassigned to him. In this case, it is quite reasonable to discount the social constraint in attitudinal attribution, and it is dubious whether CB under these conditions really qualifies as a cognitive bias or error. In contrast, another class of CBs occurs when the behavior is minimally indicative of the protagonist's willingness to engage in the behavior. For example, in the low-diagnosticity conditions of the current work, the protagonist allegedly wrote an essay, but the essay was quite short and unconvincing. Likewise, in the cross-cultural study by Masuda and Kitayama (2002), the protagonist merely read an essay allegedly written by someone else. The essay therefore revealed no strong willingness of the protagonist to defend the position. Under these conditions, it is only reasonable to infer that the protagonist's true attitude has nothing to do with the essay position. If a CB were to be observed under these conditions, it would constitute strong evidence for a cognitive bias favoring dispositional information in person perception.

In view of this distinction, available evidence is quite consistent with the hypothesis that (a) North Americans do have a persistent cognitive bias that favors dispositional information, but (b) Asians have little or no such bias. By no means does this imply that Asians have no dispositional understanding—clearly, they do. However, they do not use it when there is good reason to discount it.

Conclusion

Over 20 years ago, reviewing the evidence then available on the topic, Ned Jones compared the psychological processes involved in CB to a rocky road (Jones, 1979). The current evidence suggests that this road may be even rockier in Japan. After all, a program of research that Jones and his colleagues (see Jones, 1979, for a review) have pursued over the years has demonstrated that CB is robust and widespread in North America (Gilbert & Malone, 1995). Yet, it has become increasingly clear that the bias is considerably attenuated in Asia, at least when the focal behavior is least indicative of any strong attitude of the actor, when the perceiver is fully engaged in attitudinal judgment online, and/or when social constraint is made salient. One would hope, of course, that even though rocky, the road from act to disposition can still be analyzed systematically and traversed with some predictability. Along with some recent findings (e.g., Chiu, Morris, Hong, & Menon, 2000; Kitayama & Masuda, 1997; Nisbett et al., 2001), the present evidence suggests that such a hope is quite realistic as long as this road is recognized to be dynamically enabled by a close interplay between culture and cognition.

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Appendix

Essays Used in Study 1

Diagnostic (i.e., Long and Persuasive) Essays

Proessay

Young people are routinely exposed to violence on the television and in the street. Crime is recently on the rise especially among those young people. Action needs to be taken regarding the increasing numbers of crimes committed in the United States. For that end, I think that capital punishment should be continued.

To begin with, capital punishment reduces the number of inhabitants who lived in prison. Therefore, the amount of tax spent on criminals could be decreased and the amount of tax spent on domestic programs, like funding for the homeless, could be increased. Secondly, capital punishment could significantly deter criminals from committing their brutal criminal acts by making them aware of the harsh punishment. Most importantly, capital punishment could better teach young people right and wrong of the world by making them aware of the severe consequences of their criminal actions. Thirdly, even though there is the possibility that an innocent person could be found guilty of a crime, capital punishment should not be discontinued only because of this. Because mistakes in judgement can happen not only in capital punishment but also in other kinds of cases, overemphasizing the risk of mistakes would lead to the denial of all other forms of punishment as well.

Finally, consider your own response to this question: "What would the only fair punishment be for the murderer who killed your mother?" There's nothing other than, "An eye for an eye, a tooth for a tooth."

Antiessay

Young people are routinely exposed to violence on the television and in the street. Crime is recently on the rise especially among those young people. Action needs to be taken regarding the increasing numbers of crimes committed in the United States. However, I think that capital punishment should not be considered as an alternative to punishing those who are guilty even of the worst kind of murder.

First of all, murder of any sort is purely unethical and immoral. If the legal system is going to kill a murderer for his act of killing another human being, then the system is setting a bad example itself by killing the

murderer, who is also a human being. More importantly, capital punishment can make young people be confused about what is right and what is wrong. Secondly, capital punishment cannot deter criminals from committing their brutal criminal acts. To the contrary, it stimulates their aggression and consequently results in more severe violence. Thirdly, although it is said that capital punishment can console the feeling of victim, there is some doubt about its appropriateness.

Finally, capital punishment is an outcome of irrational and emotional decision making. Every so often, one hears that an innocent person has been found guilty of a crime because the real criminal later comes forward to take responsibility for his actions. "An eye for an eye, a tooth for a tooth" is primitive and irrational thinking, which cannot be applied to modern society.

Nondiagnostic (i.e., Short and Unpersuasive) Essays

Proessay

I think that capital punishment should be continued. When we take the viewpoint of the victim of a vicious crime, we realize that there are many cases in which justice can only be served with the criminal's death. In addition, the existence of capital punishment may deter vicious crimes. We should realize that the capital punishment is a necessary institution for maintaining our society.

Antiessay

I think that capital punishment should be abolished. It is said that vicious crimes are deterred by capital punishment. However, the effect of capital punishment is quite uncertain. In addition, I think that nothing is more precious than human life, and no one should be deprived of life by the judgment of others. We should realize that because capital punishment has many shortcomings, it should be rescinded.

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