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An experiment addressed some limitations and implications of previous findings obtained by Trafimow, Triandis, and Goto suggesting that private and collective self-cognitions are stored in different cognitive locations. Consistent with expectations, priming the private self increased the retrieval of private self-cognitions, but priming the collective self increased the retrieval of collective self-cognitions. Further, retrieval of private and collective self-cognitions was clustered by type. The fact that such clustering was obtained with collectivist subjects in their native country, and even using their native language, supports the generality of the Trafimow et al. theory to both individualistic and collectivist cultures. In addition, however, the data indicate that using a collectivist language can increase the cognitive accessibility of the collective self relative to when an individualistic language is used. Finally, we present some speculations about possible implications of this accessibility effect.

THE EFFECTS OF LANGUAGE AND PRIMING ON THE RELATIVE ACCESSIBILITY OF THE PRIVATE SELF AND THE COLLECTIVE SELF

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Several researchers (e.g., Greenwald & Pratkanis, 1984; Trafimow, Triandis, & Goto, 1991; Triandis, 1989) have argued for a distinction between the private self and the collective self. The private self includes cognitions that involve traits, states, or behaviors (e.g., “I am honest”). The collective self contains cognitions about group membership (e.g., I am a member of my family). According to Triandis (1989; also see Hofstede, 1980; Hsu, 1981, 1983, 1985), there is a great deal of accumulated data suggesting that the

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private self is emphasized more in individualistic cultures than in collectivist ones, but the reverse is true concerning the collective self. For example, Triandis, McCusker, and Hui (1990) found that people from individualistic cultures (e.g., the United States) tend to retrieve more private self-cognitions and fewer collective self-cognitions than do people from collectivist cultures (e.g., China). Further, Bochner (1994) found that Malaysians retrieved more collectivist responses than a combined Australian/British sample. Trafimow et al. (1991) argued that there are at least two possible types of cognitive organizations that can account for these findings, which they called the one-basket and two-baskets theories, as indicated below:

There are at least two ways that private and collective self-cognitions could be organized in memory. First, these cognitions may be stored in a single cognitive structure (i.e., the same place in memory), but with no internal organization. Thus, the likelihood of retrieving a self-cognition of a particular type (e.g., a private self-cognition) is determined by the frequency with which that type of self-cognition is represented, relative to the totality of self-cognitions. To use a rough analogy, consider a basket containing red and blue marbles. The probability of retrieving a red marble depends upon the number of red marbles, relative to the total number of marbles in the basket.

Another possibility is that self-cognitions are organized according to whether they pertain to the private or collective self. More specifically, private self-cognitions are organized around a general private self-concept, but collective self-cognitions are organized around a general collective self-concept. Thus, accessibility of different types of self-cognitions is largely determined by the relative accessibility of the private and collective self-concepts. To use the basket analogy again, consider two baskets of marbles, a red and a blue basket containing red and blue marbles, respectively. The probability of retrieving a red or blue marble depends upon which basket that person samples from.

Trafimow et al. (1991) obtained two types of findings that supported the two-baskets theory but contradicted the one-basket theory. First, they found that priming the private self increased the retrieval of private self-cognitions, but priming the collective self increased the retrieval of collective self-cognitions. According to the one-basket theory, people do not have separate private and collective self-concepts to prime, so the priming manipulations should have had no effect. Second, retrieval of self-cognitions was clustered by type. Specifically, the probability of retrieving a private self-cognition was greater following the retrieval of another private self-cognition than following the retrieval of a collective self-cognition, and the probability of retrieving a collective self-cognition was greater following the retrieval of another collective self-cognition than following the retrieval of a private self-cognition. If the one-basket theory were true, then the probability of retrieving a
particular type of self-cognition should not depend upon the type of self-cognition that was previously retrieved. Thus these data are inconsistent with the notion that private and collective self-cognitions are stored in the same location in memory, so they must be stored in different ones. Finally, it is worth noting that the predictions described above were confirmed not just for individualistic subjects (i.e., American university students), but for collectivist ones as well (i.e., Chinese students studying in America), which suggests that the two-baskets theory generalizes across cultures.

There are, however, some limitations concerning the Trafimow et al. (1991) data. First, because the collectivist subjects used in their experiment (Experiment 1) were all in America at the time, it is possible that exposure to Americans caused the formation of a distinct private self-concept that would otherwise not have been formed. A second limitation is that due to practical considerations, they failed to use a control group that did not receive either a private or collective self-prime. Two sources of ambiguity arise from this failure to use a "no-prime" condition. One source of ambiguity resides in the possibility that the prime itself caused people to distinguish between private and collective self-cognitions, which in turn caused the clustering of self-cognitions that were elicited from the subjects. To the extent that this is plausible, it compromises an important portion of the support for the two-baskets theory. A replication of the conditional probabilities under a no-prime control condition would resolve this difficulty. A second source of ambiguity is the difficulty in knowing whether it was the private self-prime, the collective self-prime, or both that caused the obtained differences in the proportions of private and collective self-cognitions that were retrieved. A comparison between these groups and a no-prime control condition would solve this problem. One purpose of the present experiment is to eliminate these limitations.

EVIDENCE THAT LANGUAGE CAN ACT AS A PRIME

There are reasons to suspect that the language one uses can increase the accessibility of either the private or the collective self. Consider this from a developmental perspective. It is not clear when the private self and the collective self develop as distinct concepts in memory that are associated with private self-cognitions and collective self-cognitions, respectively. However, it obviously must happen some time or else the two-baskets theory would be wrong. In addition, it seems reasonable to assume, in general, that such development occurs in people's native culture where the native language is spoken. In that case, there might be "language cues" in memory that get activated when speaking one's native language along with a private self and
a collective self that develop in the context of the activation of such cues. Assuming this, it follows that activated language cues will occur in temporal contiguity with the activation of the private self at times and with the activation of the collective self at other times. During these moments of temporal contiguity, associations between language cues and the activated self-concept can form; as there are more such instances of temporal contiguity, the association gets stronger.

Now, suppose that an experiment is performed with subjects from Hong Kong (which will be presented shortly) who speak Chinese as their native language but who have learned English as a second language. Their self-concepts developed in temporal contiguity with speaking their native language (Chinese) and so they should have formed associations between their self-concepts and Chinese language cues. Because the culture is a collectivist one, there should have been many chances for Chinese language cues to occur in temporal contiguity with collectivist types of cognitions. Therefore, there should be a strong association between Chinese language cues and collective self-cognitions. In contrast, assuming that English is learned as a second language within a particular context (e.g., school), there should have been fewer chances for English language cues to occur in temporal contiguity with collectivist cognitions, so the association between English language cues and the collective self-cognitions should be weaker. Further, if English is learned primarily in association with individualistic cognitions (i.e., American or British concepts), then the association between English language cues and private self-cognitions ought to be stronger than the association between Chinese language cues and private self-cognitions. More generally, then, if Chinese is spoken the accessibility of collective self-cognitions should be at a greater level than if English is spoken, but the reverse should be true concerning the accessibility of the private self-cognitions. Note that if the second language is learned outside of school, in an actual individualistic culture, the effect of spoken language on the accessibility of the private and the collective self should be even stronger.

For evidence that this might be true, consider some important work performed by Sussman and Rosenfeld (1982). In a part of their study, they had Venezuelans converse with each other in either their native language (Spanish) or in English. The Venezuelans sat closer together when speaking Spanish than when speaking English. A possible reason for this finding, given that Venezuelans have a collective culture, is that speaking in Spanish primed the collective self (so they sat closer together) but speaking English primed the private self (so they sat farther apart). The possibility that language can
prime a particular self-structure will be explored in the experiment to be reported.

SUMMARY OF GOALS

Given the above discussion, there were two main reasons for performing the present research. The first goal was to eliminate some limitations in the Trafimow et al. (1991) data discussed above by including collectivist subjects in their native area (Hong Kong), by performing the experiment in both English and Chinese, and by including no-prime control conditions. A second goal was to test whether the language used in the experiment could itself affect the relative accessibility of private and collective self-cognitions.

METHOD

SUBJECTS

Two-hundred seventy-six male (51.8%) and female (48.2%) subjects were recruited from the Chinese University of Hong Kong (61.6%) and from some high schools in that area (38.4%). The mean age was 18.51 and all subjects had studied English as a second language. They were randomly assigned to the conditions described below, with the exception that a few of them were specifically selected to fill up some cells with insufficient subjects. As a check on the randomization procedure, sex, schooling, and age were compared across the various cells, and no significant differences were found. Thus the effects of our manipulations on the retrieval of self-cognitions are unlikely to be due to preexisting cell differences.

DESIGN

The design was a 2 (self-prime: private self or collective self) × 2 (language: English or Chinese) × 2 (prime type: think about family and friends or story). There were also two control groups that were not primed.

PROCEDURE

All subjects were given a booklet to fill out. After being primed (or not) as is described in more detail in the following paragraph, subjects were given
5 minutes to complete the Kuhn and McPartland (1954) self-attitudes instrument (i.e., 20 sentences beginning with “I am”) in English or Chinese. They were instructed to “Answer the question: Who am I? as if you are giving the answers to yourself, not to someone else. Write your answers in the order they occur to you. DO NOT worry about the importance of logic. Go fairly fast.” The priming manipulation was in the same language as the self-attitudes instrument. A content analysis of these responses, according to an idiocentrism/group count described below, was the dependent variable. It is worth pointing out, at this point, a limitation of this procedure. As Bochner (1994) noted, many people fail to write down 20 responses. Thus we analyzed proportions of idiocentric and group items retrieved rather than totals.

As in the Trafimow et al. (1991, Experiment 1) article, one priming technique involved giving subjects 2 minutes to “think of what makes you different from your family and friends” (private self-prime) or to “think of what you have in common with your family and friends” (collective self-prime). A more subtle priming technique was also performed by Trafimow et al. (1991, Experiment 2) and was replicated in the present study. Subjects read a short story that started

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

About 10 years later, Sargon I was conscripting warriors for a new war. Sostoras was obligated to send a detachment of soldiers to aid Sargon I. He had to decide who to put in command of the detachment. After thinking about it for a long time, Sostoras eventually decided on Tiglath who was a . . .

At this point, subjects received the priming manipulation. In the private self-prime condition, the story continued,

. . . talented general. This appointment had several advantages. Sostoras was able to make an excellent general indebted to him. This would solidify Sostoras’s hold on his own dominion. In addition, the very fact of having a general such as Tiglath as his personal representative would greatly increase Sostoras’s prestige. Finally, sending his best general would be likely to make Sargon I grateful. Consequently, there was the possibility of getting rewarded by Sargon I.

In the collective self-prime condition, the story continued,

. . . member of his family. This appointment had several advantages. Sostoras was able to show his loyalty to his family. He was also able to cement their loyalty to him. In addition, having Tiglath as the commander increased the power and prestige of the family. Finally, if Tiglath performed well, Sargon I would be indebted to the family.
Finally, all subjects answered the question "Do you admire Sostoras? Circle the appropriate answer." The choices were yes, no, and not sure.

RESULTS

After a brief explanation of the coding system and some overall analyses, the data will be presented as follows. In the first analysis, only those conditions that attempt to replicate the data from Trafimow et al. (1991) will be presented (including the priming manipulations and the conditional probabilities). It is important to show such replication before any of the other findings can be taken seriously. Then we present analogous conditions, but in the Chinese language to determine whether the language the subject is using influences the effectiveness of the priming techniques. Finally, data pertaining to the issue of whether language itself can affect the relative accessibility of private and collective self-cognitions are presented (i.e., the no-prime control conditions are compared).

CODING THE DATA

After the responses in the Chinese language were translated into English by a translator who was blind to the goals of this study, all subjects' responses were scored as being idiocentric (I), group (G), or allocentric (A) cognitions by a blind coder. Idiocentric cognitions refer to personal qualities, attitudes, beliefs, or behaviors that do not relate to others and are assumed to be retrieved from the private self-structure (see Trafimow et al., 1991). Group cognitions refer to demographic categories or groups with which the subject is likely to be experiencing "common fate" and are assumed to be retrieved from the collective self-structure. For example, the cognition "I am intelligent" is idiocentric and the cognition "I am a Roman Catholic" is a group cognition. In sum, private self-cognitions are operationalized as idiocentric and collective self-cognitions as group. Finally, on the basis of previous research (see Trafimow et al., 1991; Triandis, 1989), we also defined a third type of cognition called allocentric. These cognitions refer to a quality of interdependence, friendship, responsiveness to others, and sensitivity to the viewpoints of others. An example would be the cognition "I am a person who wants to help others." Because allocentric responses are not directly relevant to the distinction between the private self and the collective self (see Trafimow et al., 1991), nor to the issues of interest here, they are not discussed in this article. Previous research (see Trafimow et al., 1991) has consistently
indicated over 90% agreement between coders and Kappa coefficients well above .70. In the analyses reported below, response type (idiocentric or group) was treated as a within-subjects variable.

OVERALL ANALYSES

We performed two general analyses; the first included the control groups and the second did not. Specifically, we performed a 2 (English vs. Chinese) × 5 (private prime-think about . . . vs. private prime-story vs. collective prime-think about . . . vs. collective prime-story vs. control) ANOVA and a 2 (English vs. Chinese) × 2 (private self vs. collective self) × 2 (think about . . . vs. story) ANOVA with the proportion of private versus collective self-cognitions retrieved as a within-subjects variable in both analyses. Both analyses resulted in significant overall effects (p < .001 in both cases). Subsequent analyses are described below.

A REPLICATION OF THE TRAFIMOW ET AL. (1991) FINDINGS

As we stated earlier, Trafimow et al. found that subjects given a private self-prime retrieved a larger proportion of idiocentric cognitions, and a lesser proportion of group cognitions, than did subjects given a collective self-prime. Further, these findings were obtained with individualistic subjects (Americans) and with collectivist ones (Chinese who were in America at the time of the experiment). It is possible that the Chinese who were in America at the time of the experiment acted less like collectivists than they would have had they been in their native country, and therefore it is possible that the priming techniques would not have otherwise affected them. This is important because Trafimow et al. argued that both individualists and collectivists have separate private and collective self-structures. Failure to replicate their findings with collectivists in their native country would compromise this argument.

Let us first consider the “think of how you are different from/similar to family and friends” priming manipulation. Consistent with previous findings, subjects who thought about how they were different (private self-prime) retrieved more idiocentric cognitions than those who received the collective self-prime (M = .77 and M = .55), but the reverse was true for the retrieval of group cognitions (M = .10 and M = .41), F(1, 18) = 10.42, p < .01. It is interesting to note, similar to previous findings (see Triandis, 1989), that even collectivists tend to retrieve more idiocentric than group cognitions when collapsed across the priming manipulations (M = .66 and M = .26), F(1, 18) = 23.56, p < .001.
TABLE 1
Proportions of Idiocentric and Group Responses Retrieved in Each Cell of the Experiment

<table>
<thead>
<tr>
<th>Cell</th>
<th>Idiocentric Mean</th>
<th>SD</th>
<th>Group Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>English language</td>
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<tr>
<td>Private prime</td>
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<td></td>
</tr>
<tr>
<td>Family and friends</td>
<td>.77</td>
<td>.21</td>
<td>.10</td>
<td>.15</td>
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<tr>
<td>Story prime</td>
<td>.76</td>
<td>.21</td>
<td>.24</td>
<td>.21</td>
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<tr>
<td>Collective prime</td>
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<tr>
<td>Family and friends</td>
<td>.55</td>
<td>.19</td>
<td>.41</td>
<td>.21</td>
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<tr>
<td>Story prime</td>
<td>.52</td>
<td>.25</td>
<td>.44</td>
<td>.26</td>
</tr>
<tr>
<td>Chinese language</td>
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<tr>
<td>Private prime</td>
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</tr>
<tr>
<td>Family and friends</td>
<td>.61</td>
<td>.21</td>
<td>.30</td>
<td>.25</td>
</tr>
<tr>
<td>Story prime</td>
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<td>.19</td>
<td>.32</td>
<td>.20</td>
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<tr>
<td>Collective prime</td>
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<tr>
<td>Family and friends</td>
<td>.62</td>
<td>.27</td>
<td>.31</td>
<td>.28</td>
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<tr>
<td>Story prime</td>
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<td>.18</td>
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<tr>
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<td>.23</td>
<td>.19</td>
</tr>
<tr>
<td>Chinese control condition</td>
<td>.55</td>
<td>.25</td>
<td>.38</td>
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</tbody>
</table>

Similar findings were obtained using the story manipulation. Subjects who received the private self-prime retrieved more idiocentric cognitions than those who received the collective self-prime (M = .76 and M = .52), but the reverse was true for the retrieval of group cognitions (M = .24 and M = .44), F(1, 19) = 4.73, p < .05. Again, these subjects were more likely to retrieve idiocentric than group cognitions when collapsed across the priming manipulations (M = .64 and M = .34), F(1, 19) = 8.61, p < .01. Thus the priming effects obtained by Trafimow et al. using a direct prime and a subtle prime replicate with collectivists in their native country (see Table 1 for a summary).

Trafimow et al. (1991) also found, consistent with the two-baskets theory, that the probability of retrieving an idiocentric response was greater following another idiocentric response than following a group response; and that the probability of retrieving a group response was greater following another group response than following an idiocentric response. As Table 2 indicates, these data replicate here. Note, however, one difference between the conditional probabilities obtained in the two articles. In the Trafimow et al. studies subjects were collapsed across the experimental conditions to obtain enough subjects to calculate stable conditional probabilities. In the present study there were sufficient subjects to allow the calculation of within-cells conditional
TABLE 2
Probability of an Idiocentric Response Given That the Previous Response Was Idiocentric or a Group Response \([p(I/I)]\) or \([p(I/G)]\), respectively) and the Probability of a Group Response Given That the Previous Response Was a Group Response or Was Idiocentric \([p(G/G)]\) or \([p(G/I)]\), respectively) for Each Cell of the Experiment

<table>
<thead>
<tr>
<th>Cell</th>
<th>(p(I/I))</th>
<th>(p(I/G))</th>
<th>(p(G/I))</th>
<th>(p(G/G))</th>
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<td>.11</td>
<td>.50</td>
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<tr>
<td>Story prime</td>
<td>.71</td>
<td>.58</td>
<td>.29</td>
<td>.42</td>
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<tr>
<td>Collective prime</td>
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<tr>
<td>Family and friends</td>
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<tr>
<td>Story prime</td>
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<td><strong>Chinese language</strong></td>
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<td>.12</td>
<td>.56</td>
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<tr>
<td>Story prime</td>
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<td>.23</td>
<td>.51</td>
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<tr>
<td>Collective prime</td>
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<td>Family and friends</td>
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<td>.46</td>
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<td>Chinese control condition</td>
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</table>

probabilities. If the conditional probabilities found by Trafimow et al. would have failed to replicate in some of the cells of the present design (especially the no-prime control conditions), then previous support for the two-baskets theory would have been compromised. In contrast, the conditional probabilities obtained by Trafimow et al. replicated in every cell investigated here. Further, and equally important, these conditional probabilities replicated even in the no-prime control conditions. Thus it is clear that the priming manipulations were not somehow responsible for “causing” them.

**THE CHINESE LANGUAGE**

We have seen that priming the private self or the collective self is effective even with collectivists in their native country. What about if they are also using their native language? Contrary to when English is used, the priming manipulations in Chinese were ineffective. Subjects are not significantly more likely to retrieve idiocentric cognitions when thinking about how they are different from their family and friends \((M = .61)\) than when thinking about
how they are similar ($M = .62$); nor is there a difference between the two conditions in their likelihood of retrieving group cognitions ($M = .30$ and $M = .31$), $F(1, 41) < 1$. [As was the case when English was used, however, subjects did retrieve more idiocentric than group cognitions when collapsed across the priming manipulations ($M = .62$ and $M = .30$), $F(1, 41) = 16.57, p < .001$.] The story prime was also ineffective. Subjects who received the private self-prime actually retrieved nonsignificantly fewer idiocentric cognitions than did those who received the collective self-prime ($M = .65$ and $M = .70$), and they retrieved nonsignificantly more group cognitions ($M = .32$ and $M = .25$), $F(1, 38) = 1.14, p > .1$. [And they retrieved more idiocentric than group cognitions when collapsed across the priming manipulations ($M = .67$ and $M = .29$), $F(1, 38) = 44.74, p < .001$.] In sum, there were no effects of the priming manipulations when the Chinese language was used.

The failure to obtain priming effects when the Chinese language was used opens up some interesting possibilities. First, perhaps the two-baskets theory only applies when the language is English (or some other “individualistic” language). Second, perhaps the Chinese language itself primed information that caused subjects to retrieve a lower proportion of idiocentric cognitions and a greater proportion of group cognitions relative to subjects performing the experiment in English. In that case, the collective self-primes used would, in essence, have primed information that had already been made accessible by the Chinese language. A third possibility, of course, is that something went wrong in the translation process and the Chinese responses are meaningless.

The conditional probabilities presented in Table 2 can help us resolve this issue. Notice that although the priming effects obtained in English were not replicated in Chinese, the conditional probability data are similar in both languages. If the two-baskets theory only applies to the English language, or if the Chinese responses were meaningless (because of translation or other problems), then the conditional probability data should not have been similar in both languages. Therefore, because the fact that they were similar contradicts these alternatives, there is some support for the possibility that the Chinese language itself had a priming effect. Further support for this hypothesis will be discussed presently.

IS LANGUAGE A PRIME?

To assess the effect of language as a prime, we can simply look at the two control groups, that is, the two groups where no prime was presented. When subjects performed the “I am” items in English, they retrieved more idiocentric cognitions than in Chinese ($M = .73$ and $M = .55$), but the reverse was true for group cognitions ($M = .23$ and $M = .38$), $F(1, 150) = 19.02, p < .001$. So
it seems that the language used was an important determinant of the relative accessibility of private and collective self-cognitions.

The English language control group is useful in another way. Trafimow et al. (1991) and the data previously reported here showed that priming one self-concept or the other affected the proportions of idiocentric and group responses subjects retrieved (as long as English was used). However, it is not clear which prime (or both) was most responsible for the effect. Fortunately, this can be determined now simply by comparing the private self-prime conditions (in English) and the collective self-prime conditions (in English) to the control condition (in English). Consequently, subjects were pooled over both private self-prime conditions and both collective self-prime conditions, and were then compared to the control group for both idiocentric and group responses. Interestingly, there was no discernible difference between the private self-prime conditions and the control condition on the proportion of idiocentric cognitions retrieved ($M = .76$ and $M = .72$), $t(103) = .82$, $p > .1$; or on the proportion of group responses retrieved ($M = .17$ and $M = .23$), $t(103) = 1.35$, $p > .1$. In contrast, subjects in the collective self-prime conditions retrieved a lesser proportion of idiocentric cognitions than did subjects in the control group ($M = .53$ and $M = .72$), $t(102) = 3.84$, $p < .001$; and a greater proportion of group cognitions ($M = .43$ and $M = .23$), $t(102) = 3.93$, $p < .001$. In sum, it appears that the collective self-primes are the only ones that have an effect (relative to a no-prime control condition). Alternatively, the private self may simply be more accessible to begin with (especially in English) and therefore less affected by a manipulation designed to make it so.

DISCUSSION

The present findings extend the support Trafimow et al. (1991) obtained for the two-baskets theory in several ways. For example, the priming manipulations were shown to be effective even when the subjects were collectivists in their native country. This indicates that subjects in the Trafimow et al. study did not form a private self simply as a result of visiting an individualist country—even collectivists who have not visited an individualistic country seem to have a private self. However, there are two caveats that need to be repeated. First, these priming effects were only obtained when the English language was used. Second, only the collective priming manipulations seem to have been effective relative to a no-prime control group.

Another way of extending previous findings concerns the conditional probability analyses. Trafimow et al. had shown that the probability of
retrieving a particular type of self-cognition was greater if the previous one retrieved was of a similar type rather than of a different type, but they were forced to pool subjects across priming conditions to show the effect. The conditional probabilities obtained here not only replicated previous findings but did so within each cell of the design and in no-prime control conditions in both English and Chinese. Consequently, it is difficult to argue that (a) the finding is not robust or (b) the priming manipulations somehow caused people to retrieve self-cognitions in a clustered fashion.

The possible priming effects of language bring up an interesting methodological issue; namely, that conducting a study in an “individualistic” or “collectivist” language can cause subjects to differentially access private or collective self-cognitions when answering questionnaires. Consider an example where this might become important. Imagine that members from an individualistic culture and a collectivist culture fill out questionnaires—both groups in their native languages. The individualists access a greater proportion of private self-cognitions whereas the collectivists, because of the priming effect of using their native language, access a greater proportion of collective self-cognitions. As a result, large differences are obtained. Are the two cultures really that different? Suppose both groups of subjects had been induced to use the same language (assuming that some of them would have been bilingual) and consequently had not been primed to access different types of self-cognitions, would such large differences have been obtained? Of course, one can also take the reverse perspective and argue that because language is part of culture it would be a mistake to have people use a language that is not native to them when answering questionnaires devised by cross-cultural psychologists. And if this causes subjects from different cultures to access different types of self-cognitions, then so be it! Bond and his colleagues (Bond, 1985; Bond & Cheung, 1984; Bond & Yang, 1982) have explored the consequences of using one's second language in a variety of domains.

It is interesting to consider alternative explanations about why the priming manipulation was effective in English but not in Chinese. One possibility is based on previous research (see Markus & Kitayama, 1991; Smith & Bond, 1993; Triandis, 1989, 1994, for reviews) indicating that individuals in collectivist cultures are members of few groups (relative to those in individualistic cultures). Consequently, if memories of these few groups are primed (by the Chinese language), there are no other groups left to prime. So any additional collective self-prime will have no effect.

A second interpretation is also worthy of consideration. A close look at Table 1, averaging across whether a “think of” or story prime was used, indicates that both private and collective self-primes in the Chinese language
increased (slightly) retrieval of private self-cognitions (.63 and .66) relative to the control Chinese language condition (.55). Why should the collective self-prime in the Chinese language increase retrieval of private self-cognitions? One possibility is suggested by research performed by Cousins (1989). This researcher found that although Americans described themselves with more general trait terms than did Japanese in an unspecified context, the reverse was true when specific settings were mentioned. This indicates that the Japanese subjects had private self-cognitions stored that may have been context-dependent. Activating the context, then, liberated these private self-cognitions. A similar effect may have happened here. The Chinese language could have activated specific contexts that, in turn, stimulated the retrieval of private self-cognitions associated with those contexts.

Although the present experiment was concerned with the retrieval of private and collective self-cognitions, the results are quite consistent with data obtained by Miller (1984; Miller, Bersoff, & Harwood, 1990) indicating that people in collective cultures are less likely than those in individualistic ones to make trait attributions for the behavior of others, and are more likely to consider context-specific variables (see Smith & Bond, 1993, for a review). The data presented here suggest a possible explanation for Miller’s findings. Specifically, the private self, to which cognitions about traits are associated, is more accessible for individualists than for collectivists. In contrast, the reverse is true concerning the accessibility of the collective self. Consequently, trait attributions come more easily to individualists than to collectivists; but attributions to considerations other than traits (e.g., interpersonal ones) come more easily to collectivists than to individualists. Thus Miller’s findings and the present results complement each other nicely.

The importance of concept accessibility is difficult to overstate, especially with regard to attributions for the behavior of others. For example, Trafimow & Schneider (1994) asked subjects to make attributions in such a way that either the person or the situation was made more accessible. When person information was made more accessible, the usual “correspondence bias” occurred whereby subjects considered person information at the expense of situation information. But when the situation was made more accessible, than a reverse correspondence bias was found; subjects considered situation information at the expense of person information (also see Quattrone, 1982). We are not arguing that correspondence bias is a false phenomenon, only that it is largely dependent upon the information that is accessible at the time. If the situation is made accessible, whether because of a deliberate attempt by an experimenter (e.g., Trafimow & Schneider, 1994) or because of a more subtle effect of one’s culture priming the collective self (e.g., Miller, 1984), the result is the same—a decrease or reversal of the correspondence bias.
CONCLUSION

The goals of the present study were twofold. The first goal was to extend findings obtained by Trafimow et al. (1991) in support of the two-baskets theory (a) by replicating their findings with collectivist subjects in their native country, (b) by using no-prime control groups, and (c) by calculating within-cells conditional probabilities. Although the two-baskets theory was mainly supported, and certainly provides a much better account of the data than the opposing one-basket theory (which predicts wrongly in practically every case; see Trafimow et al. for details), some limitations emerged that were not previously apparent.

A second goal was to investigate the importance of language on the retrieval of private and collective self-cognitions. On the basis of the obtained data, we speculated about the importance of self-concept accessibility in determining how people answer questionnaires, the conditions under which priming manipulations should be effective, and when people should be most likely to make trait or other attributions for the behavior of others. More generally, we suspect that self-concept accessibility may have much more wide-ranging effects than we have considered here. Only future investigations can tell.

NOTES

1. We thank an anonymous reviewer for suggesting these analyses.
2. Based on the suggestion of an anonymous reviewer, this analysis, as well as all of those described below, was conducted in two other ways. First, consistent with Bochner (1994), items were weighted by the order in which they were retrieved, with earlier items getting higher weights (presumably they were more accessible). Because not everyone retrieved 20 items, we had to consider both the total number of items retrieved (N) and the order of the specific item under consideration (k). So each item was weighted by the following formula: (1+N)k/(N)+(N-1)+(N-2)...(N-N).

In addition, to test the possibility that the level of specificity of the recalled items might account for the results, a blind coder coded each item on its level of specificity. This variable was then used as a covariate in all of the analyses. Both of these variations resulted in findings similar to those reported here, so nothing more will be said about them.
3. Instances where an allocentric cognition was followed by an allocentric one were included in the denominator to calculate p(I/I) or p(G/G), and instances where a group cognition was followed by an allocentric one were included in the denominator to calculate p(I/G) and p(G/G).

Thus p(I/I) + p(G/I) and p(I/G) + p(G/G) did not always sum to 1.
4. Readers who are interested in including measures of the two selves in their questionnaires are encouraged to read work by Singelis (1994), who created separate measures for the two selves. Further, his confirmatory factor analysis indicates (a) that a two-factor model (which assumes that the two selves are distinct and should be measured separately) provided a much
better fit to the data than the competing one-factor model (that does not make these assumptions) and (b) that the two factors are essentially uncorrelated with each other.

REFERENCES


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