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# How Priming the Private Self or Collective Self Affects the Relative Weights of Attitudes and Subjective Norms

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*Three experiments tested the hypothesis that the accessibility of the private self and the collective self affects the relative weights given to attitudes and subjective norms when forming a behavioral intention. The results of Experiment 1 indicate that increasing the accessibility of the private self caused participants to place more weight on attitudes than subjective norms but that increasing the accessibility of the collective self caused participants to place more weight on subjective norms than on attitudes. Experiments 2 and 3, using a subtle priming procedure, replicated this pattern of results. In addition, the findings of Experiment 3 provided direct evidence for the differential priming of the two self-concepts. Hence, the data suggest an intimate connection between the accessibility of the private and collective selves and whether people use attitudes or subjective norms to make behavioral intentions.*

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As psychologists, one of our most central concerns is understanding the determinants of behavior. Fishbein (1967, 1980) has argued that the proximal determinants of reasoned behavior are attitudes and subjective norms. An attitude is an evaluation of a behavior and a subjective norm is a person's opinion about whether important others think he or she should perform a behavior (Ajzen & Fishbein, 1980; Fishbein, 1967; Fishbein & Ajzen, 1975).

The degree to which attitudes and subjective norms affect behavioral intentions may depend on several variables such as the type of behavior under consideration (Trafimow & Fishbein, 1994a, 1994b), the type of person involved (Trafimow & Finlay, 1996), or other factors (Trafimow, in press, for a review). Traditionally, the relative impact of attitudes and subjective norms on

behavioral intentions has been assessed using multiple regression paradigms to assign beta-weights to each. If the attitude is assigned a large beta-weight, and the subjective norm is assigned a small one, then the behavior is deemed to be under attitudinal control (hereafter, AC behavior). In contrast, if the reverse is true, then the behavior is deemed to be under normative control (hereafter, NC behavior). Although behavior is well predicted by attitudes and subjective norms (Ajzen & Fishbein, 1980; Fishbein, 1980; Stasson & Fishbein, 1990; Trafimow, 1994), several researchers have questioned the validity of the attitude-subjective norm distinction (Liska, 1984; Miniard & Cohen, 1981). Furthermore, even given the distinction, it is not yet clear what variables might moderate participants' intentions to place a greater weight on attitudes or subjective norms.

## *Attitudes and Subjective Norms: Do People Distinguish Between Them?*

Despite criticisms and findings during the 1980s that seemed contrary to the attitude-subjective norm distinction (Liska, 1984; Miniard & Cohen, 1981; Oliver & Bearden, 1985; Shimp & Kavas, 1984), recent reviews indicate that it has received a great deal of support (Trafimow, in press). For example, along with past research showing that behavioral intentions are correlated with attitudes and subjective norms to a greater extent

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than attitudes and subjective norms are with each other (Bowman & Fishbein, 1978; Jaccard & Davidson, 1972), thus supporting the viewpoint that people distinguish between attitudes and subjective norms, recent research indicates that attitudes and subjective norms can be manipulated independently of each other. Trafimow and Fishbein (1994a) identified, on the basis of previously obtained beta-weights, behaviors that were under either attitudinal or normative control. They subsequently manipulated attitudes toward these behaviors and found that the manipulation affected intentions to perform AC more than NC behaviors. In later studies (Trafimow & Fishbein, 1994b), they obtained analogous effects when they manipulated subjective norms.

Recent research also shows that people distinguish between the beliefs underlying attitudes and subjective norms. According to the theory of reasoned action (Fishbein, 1967; Fishbein & Ajzen, 1975), the bases for attitudes and subjective norms are behavioral and normative beliefs, respectively. Behavioral beliefs represent the perceived consequences of performing the behavior, whereas normative beliefs represent the perceived preferences of important others regarding whether the behavior should or should not be performed. If people compare behavioral beliefs with each other to form an attitude, and normative beliefs with each other to form a subjective norm, then they should forge associations between behavioral beliefs and other behavioral beliefs, and between normative beliefs and other normative beliefs, but not between behavioral and normative ones. Thus, if people are asked to write down their beliefs, the retrieval of a behavioral belief should elicit the retrieval of another behavioral one and the retrieval of a normative belief should elicit the retrieval of another normative one. In sum, the lists people write down should be clustered by belief type. Trafimow and Fishbein (1995) found such evidence of clustering by belief type, not only with experimentally provided beliefs, but when participants were asked to report their own previously held beliefs about a behavior. Furthermore, various control processing objectives such as memorizing the information or guessing someone else's intention failed to produce the clustering. Recent research we have conducted indicates that this clustering effect is obtained even when the favorableness of the behavioral and normative beliefs is varied (e.g., behavioral beliefs are positive and normative beliefs are negative or both behavioral and normative beliefs are of the same valence) (Ybarra & Trafimow, 1997).

The distinction between attitudes and subjective norms is also supported by individual differences evidence. For example, the constructs of private self-consciousness (PSC) and self-monitoring (SM) have been shown to be associated with the differential weighting of attitudes

and subjective norms. In one study (Miller & Grush, 1984), people who displayed high PSC and low SM produced greater agreement between attitude and the behavior of spending time on school work. However, other combinations of these characteristics produced greater agreement between subjective norm and behavior. Another study by Arie, Durand, and Bearden (1979) showed that people's intentions to patronize credit unions were either under attitudinal or normative control depending on whether the person was an opinion leader or not. The intentions of opinion leaders were under attitudinal control, whereas those of others were under normative control. More recently, Trafimow and Finlay (1996) performed within-participants analyses across a variety of behaviors and demonstrated that *people*, as well as behaviors, can be under attitudinal or normative control. Moreover, when normatively controlled participants were removed from the original between-participants analyses, the prediction of behavioral intentions from attitudes increased while that from subjective norms was virtually eliminated. Finally, individual differences in the extent to which people were under normative control were shown to be correlated with measures of the strength of the collective self (Singelis, 1994). A more detailed discussion of self-concepts and the distinction between attitudes and subjective norms will be given presently. The point that is made by this individual difference research is that depending on personal characteristics, people rely on one or the other element to a greater extent when forming behavioral intentions across a variety of behaviors. In sum, as Trafimow and Finlay (1996) suggested, although attitudes and subjective norms can be correlated with each other, this does not mean that people fail to distinguish between the two.

*A Second Distinction:  
Private- and Collective-Self Cognitions*

Several researchers have argued that there are two kinds of self-cognitions (Greenwald & Pratkanis, 1984; Markus & Kitayama, 1991; Triandis, 1989)—private- and collective-self cognitions. According to Triandis, private-self cognitions reflect an assessment of the self by the self, whereas collective-self cognitions derive from an assessment of the self by a specific reference group or collective. For instance, the private self includes cognitions involving traits, states, and behaviors of the person (e.g., "I am introverted," "I will buy X") and the collective self includes cognitions whose basis is in some collective (e.g., "My family thinks I am introverted," "My coworkers believe I travel too much") (Triandis, 1989).

Trafimow, Triandis, and Goto (1991) proposed two alternative theories that incorporated this distinction between the private and collective aspects of the self; these are a one-location theory and a two-location theory.

The one-location theory posits that a single cognitive structure stores both private- and collective-self cognitions, so that the probability of retrieving a particular type of self-cognition depends on the number of that type relative to the totality of self-cognitions. In contrast, the two-location theory posits that private- and collective-self cognitions are stored independently of each other, with private-self cognitions organized around a general private self-concept and collective-self cognitions organized around a general collective self-concept. Thus, the retrieval of a particular type of self-cognition depends on the accessibility of the self-concept with which it is associated.

There were three main findings from the Trafimow et al. (1991) studies. First, in support of Triandis's (1989) proposal that people from different cultural contexts sample from the private and collective selves with different probabilities, participants from individualistic cultures retrieved more private-self cognitions and fewer collective-self cognitions than participants from collectivistic cultures. Second, priming the private or collective self increased the retrieval of private- or collective-self cognitions, respectively. Third, there was a higher probability of retrieving a particular type of self-cognition if a similar type of self-cognition had been previously retrieved. These two latter findings do not support the one-location theory, which posits that self-cognitions are not organized by self-concept, because a priming procedure should not have differentially affected the retrieval of either type of cognition. Furthermore, the one-location theory posits that each self-cognition is retrieved independently, but the conditional probability data indicated the opposite; the probability of retrieving a particular type of self-cognition depended on the type of self-cognition previously retrieved. Both of these predictions, which are made by the two-location theory, have recently been replicated by Trafimow, Silverman, Fan, and Law (1997).

#### *Mapping Attitudes and Subjective Norms Onto the Private-Collective Self-Distinction*

Triandis (1989) has argued that when people sample cognitions from the private self, they are more likely to be influenced by personal goals and needs. In contrast, when people sample from the collective self, they are more likely to be influenced by the norms and values of the particular collective and behave in a manner considered appropriate by members of that collective. Therefore, it is reasonable to suggest that when the private self is made more accessible in memory, people's attitudes toward the behavior (or the basis of those attitudes) will also become more accessible. This increase in accessibility should thus allow attitudes to have a greater impact than subjective norms in forming a behavioral intention.

However, when the collective self is made more accessible, people's subjective norms (or the basis of those norms) are likely to increase in accessibility, which should allow them to have a greater impact than attitudes on a behavioral intention. We performed three experiments to test these hypotheses.

### EXPERIMENT 1

#### *Method*

##### *DESIGN AND PARTICIPANTS*

Sixty introductory psychology students at New Mexico State University were given course credit for participation. Participants were randomly assigned to one of the two experimental conditions (private-self prime or collective-self prime) and were run in noninteracting groups of 4 to 6 by an experimenter who was blind to the experimental conditions. The participants were informed that their responses would be anonymous.

##### *PROCEDURE*

Participants were told that the experimental session involved two separate experiments that were being conducted in the same session because of their brevity. They were then given two handouts, each corresponding to one of the two experiments. Based on earlier research by Trafimow et al. (1991), for the ostensible first experiment, participants in the private-self priming condition were instructed: "For the next two minutes, you will not need to write anything. Please think of what makes you different from your family and friends." Then they were asked to answer the question, "What do you expect yourself to do?" In the collective-self priming condition, participants were instructed: "For the next two minutes, you will not need to write anything. Please think of what you have in common with your family and friends." Then they were asked the question, "What do they expect you to do?"

Once the participants completed the first handout, they were told that that concluded the first experiment. Next, they were directed to complete the second handout that corresponded to the second, ostensibly separate experiment. On the following handout, participants were asked to indicate, on 7-point scales, their intention, attitude, and subjective norm toward using a condom when having sex. This specific behavior was chosen because (a) of its social relevance (Fishbein, Middlestadt, & Trafimow, 1993; Fishbein, Trafimow, et al., 1993; Fishbein et al., 1995) and because (b) it has been shown to have a strong attitudinal and normative component (Trafimow, 1994). The intention measure took the form of a likelihood estimate with no specified time frame. After completing the questionnaire, participants were debriefed. None of the participants indicated any suspicion.

## Results

In the regression analysis, we regressed the criterion, behavioral intentions, on the two predictors, attitudes and subjective norms, and this was done separately for the two priming conditions. Overall, for both private- and collective-self prime participants, attitudes and subjective norms were good predictors of intentions to use a condom ( $R = .68$  and  $R = .71$ , respectively). However, based on the present conceptualization, more specific predictions were made. We expected that attitudes and subjective norms would differentially predict behavioral intentions depending on the prime the participants received. These predictions were confirmed. Participants who received a private-self prime produced a greater attitude beta-weight ( $\beta = .54$ ),  $F(1, 27) = 11.22$ ,  $p < .002$ , than subjective norm beta-weight ( $\beta = .23$ ),  $F(1, 27) = 2.13$ ,  $p < .15$ . In contrast, participants who received a collective-self prime produced a greater subjective norm beta-weight ( $\beta = .53$ ),  $F(1, 27) = 12.53$ ,  $p < .001$ , than attitude beta-weight ( $\beta = .29$ ),  $F(1, 27) = 3.84$ ,  $p < .06$ .

The correlations for the three variables are presented in Table 1 and are sorted by priming condition. Another way of demonstrating the impact of the private-self and collective-self primes on the weighting of attitudes and subjective norms is to determine the increase in  $R^2$  due to attitudes while controlling for subjective norms and the increase in  $R^2$  due to subjective norms while controlling for attitudes. This was done for both priming conditions. In the private-self prime condition, the increase in  $R^2$  due to attitudes was .232, whereas the increase in  $R^2$  due to subjective norms was .053, a difference in  $R^2$  of .179. In the collective-self prime condition, the increase in  $R^2$  due to attitudes was .055, whereas the increase in  $R^2$  due to subjective norms was .213, a difference in  $R^2$  of .158. Given that you can find the variance accounted for by squaring a correlation, we reversed the process and calculated the correlation that would correspond to the differences in the increases of  $R^2$  by taking the square root. When converted to correlations, these differences in  $R^2$  correspond to an  $R$  of .423 and an  $R$  of .397 for the private- and collective-self primes, respectively.<sup>1</sup> These additional analyses thus support the notion that participants receiving a private-self prime weighted attitudes more heavily than subjective norms in forming a behavioral intention, whereas participants receiving a collective-self prime weighted subjective norms more heavily than attitudes.

## EXPERIMENT 2

Despite the effectiveness of the primes in Experiment 1 to influence whether participants weighted attitudes or subjective norms in forming a behavioral intention, we

**TABLE 1: Correlations Among the Attitude, Subjective Norm, and Behavioral Intention Measure as a Function of Priming Condition (Experiment 1)**

	Prime			
	Private-Self Prime		Collective-Self Prime	
	Attitude	Norm	Attitude	Norm
Intention	.64	.48	.54	.67
Attitude		.46		.45

felt that our case would be strengthened considerably if we could replicate the results with a more subtle priming procedure. Experiment 2 was designed to do this.

## Method

### DESIGN AND PARTICIPANTS

Forty-eight introductory psychology students at New Mexico State University were given course credit for their participation. Identical to Experiment 1, participants were randomly assigned to either the private-self prime or collective-self prime condition and were run in non-interacting groups of 4 to 6 by an experimenter blind to the experimental conditions. Participants were told that their responses were completely anonymous.

### PROCEDURE

Participants were again primed to increase the accessibility of either the private or the collective self. However, to prime a particular aspect of the self, participants were told that the first experiment involved the role of self-imagery in text comprehension. The participants then read through a short passage that was modified from earlier research by Trafimow et al. (1991). All participants were asked to imagine that they were "Sostoras," an ancient Sumerian warrior. After receiving these instructions, they all read:

I, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, I was rewarded with a small kingdom of my own to rule. About 10 years later, Sargon I was conscripting warriors for a new war. I was obligated to send a detachment of soldiers to aid Sargon I. I had to decide who to put in command of the detachment. After thinking about it for a long time, I eventually decided on Tiglath who was a . . .

At this point, participants were presented with the priming manipulation. Participants in the private-self prime condition read:

. . . talented general. This appointment had several advantages. I was able to make an excellent general indebted to me. This would solidify my hold on my own

dominion. In addition, the very fact of having a general such as Tiglath as my personal representative would greatly increase my prestige. Finally, sending my best general would be likely to make Sargon I grateful. Consequently, there was the possibility of getting rewarded by Sargon I.

Participants in the collective-self prime condition read:

... member of my family. This appointment had several advantages. I was able to show my loyalty to my family. I was also able to cement their loyalty to me. In addition, having Tiglath as the commander increased the power and prestige of my family. Finally, if Tiglath performed well, Sargon I would be indebted to my family.

Then all participants answered the question, "Do you admire yourself? Circle the appropriate answer." The choices were yes, no, and not sure.

Participants were then directed to the second experiment of the session. They were asked to indicate their intention, attitude, and subjective norm toward using a condom during sex, just as in Experiment 1.

*Results*

Once again, behavioral intentions were regressed onto attitudes and subjective norms, and this was done for each priming condition. The results from Experiment 2 replicated those of Experiment 1. For both private- and collective-self prime participants, attitudes and subjective norms were good predictors of intentions to use a condom ( $R = .77$  and  $R = .53$ , respectively). The pattern of beta-weights also replicated. Participants who received a private-self prime produced an attitude beta-weight ( $\beta = .65$ ),  $F(1, 21) = 20.61$ ,  $p < .0002$ , that was greater than the subjective norm beta-weight ( $\beta = .28$ ),  $F(1, 21) = 3.80$ ,  $p < .06$ . In contrast, participants who received a collective-self prime produced a subjective norm beta-weight ( $\beta = .49$ ),  $F(1, 21) = 7.02$ ,  $p < .01$ , that was greater than the attitude beta-weight ( $\beta = .14$ ),  $F(1, 21) < 1.00$ .

The correlations for the three variables are presented in Table 2. To further demonstrate the impact of the private-self and collective-self primes on the weighting of attitudes and subjective norms, we determined the increase in  $R^2$  due to attitudes while controlling for subjective norms and the increase in  $R^2$  due to subjective norms while controlling for attitudes. In the private-self prime condition, the increase in  $R^2$  due to attitudes was .408, whereas the increase in  $R^2$  due to subjective norms was .074, a difference in  $R^2$  of .334. In the collective-self prime condition, the increase in  $R^2$  due to attitudes was .021, whereas the increase in  $R^2$  due to subjective norms was .244, a difference in  $R^2$  of .223. We also calculated the correlations that would correspond to the differ-

**TABLE 2: Correlations Among the Attitude, Subjective Norm, and Behavioral Intention Measure as a Function of Priming Condition (Experiment 2)**

	<i>Prime</i>			
	<i>Private-Self Prime</i>		<i>Collective-Self Prime</i>	
	<i>Attitude</i>	<i>Norm</i>	<i>Attitude</i>	<i>Norm</i>
Intention	.72	.43	.19	.51
Attitude		.22		.10

ences in the increases of  $R^2$  by taking the square root. Similar to Experiment 1, the differences in  $R^2$  increases were substantial and corresponded to  $R = .578$  and  $R = .472$  for the private- and collective-self primes, respectively. These analyses provide strong evidence that participants in the private-self prime condition weighted attitudes more heavily than subjective norms in forming a behavioral intention and that participants in the collective-self prime condition weighted subjective norms more heavily than attitudes.

*Discussion*

Although the data from Experiments 1 and 2 support our conceptualization, there were two loose ends that were addressed in Experiment 3. First, a manipulation check was added to ensure that the priming manipulation actually affected the relative accessibility of the private self and collective self. Second, to address the possibility that participants' responses to the attitudinal and normative items may have been influenced by their having previously indicated their intentions, we changed the order of the items so that intention was assessed last.

EXPERIMENT 3

*Method*

*DESIGN AND PARTICIPANTS*

Fifty-two introductory psychology students at the University of Michigan were given course credit for their participation. Participants were randomly assigned to either the private-self prime or collective-self prime condition and were run in noninteracting groups of 4 to 6 by an experimenter blind to the experimental conditions. Participants were told that their responses were completely anonymous.

*PROCEDURE*

The same priming procedure from Experiment 2 was used in this experiment. Unlike Experiments 1 and 2, in which participants indicated their behavioral intentions then their attitude toward the behavior and subjective norm judgments, in this experiment, the behavioral intention was the last of the three measures assessed. To

further control for potential order effects, half of the participants indicated their attitude toward the behavior first, followed by their subjective norm, and finally their behavioral intention. The other half of the participants indicated their subjective norm first, followed by their attitude toward the behavior, and then their behavioral intention. Once participants completed these items, they were presented with the manipulation check that assessed the priming of the self-concepts (Trafimow et al., 1991). For this task, participants completed the sentence "I am . . ." six times.

### Results

Before examining the regression models and the assignment of beta-weights in each priming condition, it is instructive to assess whether the priming of the different self-concepts had an impact on the manipulation check. Participants' responses to the "I am" task were coded as either private-self cognitions (e.g., I am kind, I am athletic) or collective-self cognitions (e.g., I am an older sister, I am a good friend). Participants' self-cognitions were then submitted to a 2 (prime)  $\times$  2 (cognition type) mixed design analysis of variance (ANOVA), with the latter factor as a repeated measure. The analysis yielded a significant interaction of prime and cognition type,  $F(1, 50) = 2.66, p < .05$ . Although participants in both conditions reported more private- than collective-self cognitions (also see Trafimow et al., 1991), participants in the private-self prime condition ( $M = 5.61$ ) reported more private-self cognitions than participants in the collective-self prime condition ( $M = 5.27$ ),  $p < .05$ . In contrast, participants in the collective-self prime condition reported more collective-self cognitions ( $M = .73$ ) than participants in the private-self prime condition ( $M = .39$ ),  $p < .05$ . Thus, it appears that the priming manipulations had the intended effect of increasing the accessibility of the self-concepts.

Having demonstrated that the two self-concepts were differentially primed, we now turn to the regression analyses. As in the previous two experiments, for each priming condition, behavioral intention was regressed on the two predictors, attitudes and subjective norms. Attitudes and subjective norms were again good predictors for private- and collective-self prime participants ( $R = .47$  and  $R = .79$ , respectively). The pattern of beta-weights was also consistent with the findings of the two previous experiments. Participants who received a private-self prime produced an attitude beta-weight ( $\beta = .43$ ),  $F(1, 23) = 5.20, p < .03$ , that was greater than the subjective norm beta-weight ( $\beta = .13$ ),  $F(1, 23) < 1.00$ . In contrast, participants who received a collective-self prime produced a subjective norm beta-weight ( $\beta = .66$ ),  $F(1, 23) = 11.70, p < .002$ , that was greater than the attitude beta-weight ( $\beta = .17$ ),  $F(1, 23) < 1.00$ .

The correlations for the three variables are presented in Table 3. As was done for Experiments 1 and 2, we determined the increase in  $R^2$  due to attitudes while controlling for subjective norms and the increase in  $R^2$  due to subjective norms while controlling for attitudes. In the private-self prime condition, the increase in  $R^2$  due to attitudes was .176, whereas the increase in  $R^2$  due to subjective norms was .022, a difference in  $R^2$  of .154. In the collective-self prime condition, the increase in  $R^2$  due to attitudes was .015, whereas the increase in  $R^2$  due to subjective norms was .188, a difference in  $R^2$  of .173. We also calculated the correlations that would correspond to the differences in the increases of  $R^2$  by taking the square root. Similar to Experiments 1 and 2, the differences in  $R^2$  increases were substantial and corresponded to  $R = .392$  and  $R = .415$  for the private- and collective-self primes, respectively. These analyses provide strong evidence that participants in the private-self prime condition weighted attitudes more heavily than subjective norms in forming a behavioral intention, whereas participants in the collective-self prime condition weighted subjective norms more heavily than attitudes.

### ACROSS EXPERIMENT REGRESSION ANALYSES

We conducted an additional analysis to further test the effects of the priming manipulation on the relative importance of attitudes and subjective norms in determining intentions. For participants in all three experiments, we dummy coded the priming conditions as 0 (collective prime) or 1 (private prime) and computed the cross-products between this dummy variable and the attitude and subjective norm measures. Subsequently, these interaction terms were entered into a regression analysis after the effects of priming condition, attitude, and subjective norm had already been entered into the model. The model was quite predictive of behavioral intentions ( $R = .68$ ). Table 4 shows the components of the full regression model with interaction effects and their associated probabilities. It turns out, as would be expected, that both attitudes ( $\beta = .33$ ) and subjective norms ( $\beta = .48$ ) are reliable predictors of behavioral intentions. However, supporting the central theses of this research, it is also the case that the interactions of prime and attitude ( $\beta = .49$ ) and prime and subjective norm ( $\beta = -.53$ ) are reliable predictors of behavioral intentions. These effects clearly indicate that as the value of the prime (collective = 0, private = 1) increases, so does the value of the attitude. In contrast, the value of the subjective norm increases as the value of the prime decreases. Taken as a whole, the results of the three experiments offer consistent support for the notion that the accessibility of the self-concepts can determine whether people weight attitudes or subjective norms more when forming behavioral intentions.<sup>2</sup>

**TABLE 3: Correlations Among the Attitude, Subjective Norm, and Behavioral Intention Measure as a Function of Priming Condition (Experiment 3)**

	<i>Prime</i>			
	<i>Private-Self Prime</i>		<i>Collective-Self Prime</i>	
	<i>Attitude</i>	<i>Norm</i>	<i>Attitude</i>	<i>Norm</i>
Intention	.45	.22	.66	.78
Attitude		.20		.74

## GENERAL DISCUSSION

Trafimow et al. (1991) established that the accessibility of self-concepts is associated with the retrieval of cognitions relevant to them. These researchers also suggested that these self-concepts and/or their associated self-cognitions should have important consequences for judgment and behavior. The current research has tied this suggestion to the observation that behavioral intentions are proximally determined by attitudes and/or subjective norms, depending on the behavior of concern (Trafimow & Fishbein, 1994a, 1994b) and/or on individual differences (Trafimow & Finlay, 1996). The findings from the three experiments indicated that behavioral intentions were influenced more by attitudes than by subjective norms when the private self was made accessible but that subjective norms were given more weight than attitudes when the collective self was made accessible. However, there are some potential limitations that need to be addressed.

One potential limitation is that demand characteristics could have been responsible for the findings obtained in Experiment 1. More specifically, despite the use of a "two-experiment" paradigm, participants who received the private-self prime may have figured out that we wanted them to respond more similarly to the attitude and intention items than to the subjective norm and intention items, and participants who received the collective-self prime may have figured out that we wanted them to respond more similarly to the subjective norm and intention items than to the attitude and intention items. Although we doubted that this was actually true, we performed Experiments 2 and 3 using a more subtle priming procedure, to make sure. The fact that the results were similar across the three experiments suggests that demand characteristics are not a plausible explanation (also see Trafimow et al., 1991; Trafimow et al., 1997).

A second potential limitation is that single items were used to measure attitudes, subjective norms, and intentions. Because it is widely accepted that single-item measures are less reliable and less valid than multiple-item measures, there are certainly grounds for objecting to our use of single items. However, a consideration of the

**TABLE 4: Regression Model Across the Experiments, Including the Interaction Components**

<i>Model Effects</i>	<i>Beta</i>	<i>F</i>	<i>Probability &gt;  F </i>
Prime	.07	< 1.00	<i>ns</i>
Attitude	.33	14.14	.0002
Norm	.48	25.60	.0001
Prime × Attitude	.49	4.58	.03
Prime × Norm	-.53	4.41	.03

following militates against such an objection. First, subjective norms and intentions have traditionally been measured with single items (see Ajzen & Fishbein, 1980, for a review). Second, Trafimow and Finlay (1996) have shown that single-item measures of attitudes, subjective norms, and intentions are both reliable (based on a 1-week delay between test and retest) and valid (based on a complex pattern of correlations involving a sample of 30 behaviors). Third, the fact that intentions were well predicted by attitudes or subjective norms, depending on the prime, further suggests that the measures were valid.

*Dynamism in the Formation of Behavioral Intentions*

The success of the priming manipulations in the current research implies that the accessibility of the private and collective selves can vary across situations (Triandis, 1994); some situations such as preparing for comprehensive exams might make the private self more accessible, whereas other situations such as reuniting with family and close friends might make the collective self more accessible. This dynamic view of the private and collective selves (cf. Markus & Nurius, 1986; Markus & Wurf, 1987) suggests that people's behavioral intentions, although often quite deliberate (Fishbein & Ajzen, 1975), are open to the influence of these ever-changing accessibilities. A behavioral intention that is driven by attitudes on one day or at a certain moment due to an accessible private self, may on another day or at another moment be driven by subjective norms due to an accessible collective self.

Although the current research has demonstrated that the private and collective selves can be made accessible through recent sources of activation (priming) (also see Trafimow et al., 1991, 1997), the relative accessibility of these self-concepts also depends on how frequently they have been activated in the past (cf. Higgins, 1989; Trafimow & Finlay, 1996; Trafimow et al., 1991; Triandis, 1994). So, even though recent sources of activation for the private or collective self can add a dynamic aspect to behavioral intentions, it might be that frequent sources of activation, such as those associated with recurring cultural experiences, help to maintain a steady basis for forming behavioral intentions (Trafimow & Finlay,

1996). But when should behavioral intentions be open to the influence of a recently activated self-concept compared to a frequently activated self-concept? Put differently, when should behavioral intentions be dynamic and when should they be steady?

To answer this question, it is helpful to consider the "synapse" model of knowledge accessibility (Higgins, 1989; Higgins, Bargh, & Lombardi, 1985). The basic idea behind the synapse model is that the excitation level for a frequently primed construct should decay more slowly than the excitation level for a construct that has been primed fewer times, but more recently. By applying the synapse model to the accessibility of self-concepts, we can argue that a recently primed self-concept should drive a behavioral intention (i.e., be dynamic) if there is little delay between prime and intention formation or if the situation continues to prime that self-concept. However, if there is a significant delay between the last prime and the time a behavioral intention is formed and the particular self-concept of concern is not re-primed, then a frequently activated self-concept should drive the behavioral intention. The current research, along with the research of Trafimow and Finlay (1996), offers partial support for this proposal. We found that by priming a particular aspect of the self and then having participants make a behavioral intention without delay, participants' behavioral intentions were influenced by the primed self-concept. This finding conceptually replicates the recency prediction of the synapse model. Trafimow and Finlay, although they did not provide any recent priming of the private and collective selves, measured their strength. These researchers found that participants with a strong collective self weighted subjective norms more than participants who possessed a less strong collective self. These findings suggest that frequently primed self-concepts (as measured by the researchers) helped to determine the behavioral intentions people made across time and across a variety of behaviors. More research will be needed, though, to clearly establish whether the dictates of the synapse model of knowledge accessibility can adequately characterize the effects of recently and frequently activated self-concepts on behavioral intentions.

Even though the accessibility of self-concepts can vary due to recency or frequency of activation, an accessible private or collective self may not necessarily affect all behavioral intentions. The behavior that was used in the present research (using a condom when having sex) was chosen partly because it has a strong attitudinal and normative component. How are behavioral intentions affected when one of the two components of a behavior dominates? Earlier we mentioned that Trafimow and Fishbein (1994a, 1994b) identified behaviors that were either under attitudinal control (AC) or normative control (NC). When attitudes were manipulated by the

experimenters, AC behaviors were affected to a greater extent than NC behaviors. When subjective norms were manipulated, NC behaviors were affected more than AC behaviors. The research by Trafimow and Fishbein leaves open two explanations concerning why some behaviors are mostly under attitudinal or normative control: (a) Attitudes or subjective norms are simply irrelevant for some behaviors, which implies that priming a particular self-concept will not affect intentions to perform them; (b) Some behaviors may prime the use of attitudinal or normative information, which implies that priming a self-concept may or may not be sufficient to overcome the priming effect of the behavior.

Finally, the findings of Trafimow and Finlay (1996) showing that both people and behaviors can be under attitudinal or normative control may provide an explanation of the recurrent finding that attitudes are typically given more weight than subjective norms in the formation of behavioral intentions (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Miniard & Cohen, 1981; Van de Putte, 1991, as reported in Eagly & Chaiken, 1993). People from individualistic cultures, compared to people from collectivistic cultures, possess a stronger and more accessible private self and are more under attitudinal than normative control (Trafimow & Finlay, 1996; Triandis, 1989). Hence, a majority of behaviors in individualistic cultures are also likely to be attitudinally controlled. But in collectivistic cultures, where the collective self is stronger and more accessible, more behaviors are likely to be under normative control.<sup>3</sup> Given that the majority of the studies examining the role of attitudes and subjective norms on behavioral intentions have been conducted with Western students, who for the most part should be under attitudinal control, it is not surprising that attitudes usually receive greater weight than subjective norms.

In conclusion, an examination of the private and collective selves in behavioral intentions not only allows us to impute some process and a sense of dynamism within the intention formation process but also suggests why different behaviors, different people, and maybe ultimately why different cultures, produce behavioral intentions that are driven to a greater or lesser extent by attitudes or subjective norms.

#### NOTES

1. According to some available experts, the exact distribution that such differences in  $R^2$  increases take on is uncharted. Therefore, no statistic is available to evaluate these values. However, by examining the magnitude of the correlations that would correspond to these values (by taking the square root), the substantial impact of the accessible knowledge on the weight given to attitudes and subjective norms should be evident.

2. We conducted a fourth study in which participants ( $n = 24$ ) did not receive a prime prior to indicating their attitudes (subjective norms), subjective norms (attitudes), and behavioral intentions. Un-



like the three experiments in which only one predictor was substantially reliable depending on priming condition, the findings from this study yielded results in which both the attitude ( $\beta = .62$ ),  $F(1, 21) = 20.16$ ,  $p < .0002$ , and subjective norm ( $\beta = .40$ ),  $F(1, 21) = 8.35$ ,  $p < .008$ , were significant predictors of behavioral intentions. These findings indicate that in the absence of a priming manipulation, American students use both attitudes and subjective norms when generating a behavioral intention for the behavior of using a condom, although the attitude receives relatively more weighting. Thus, there appears to be room to prime both the private and collective selves in American culture, in that the private prime in all three experiments eliminated an effect for subjective norm, and vice versa under a collective prime. But these findings do seem to suggest that more "chronic" sources of accessibility (the private self in America) may still place a type of ceiling on the degree to which the private self can be primed by temporary sources of activation (cf. Bargh, Bond, Lombardi, & Tota, 1986).

3. It should be noted, however, that research by Trafimow et al. (1991) suggests that the private self is more accessible than the collective self even in collectivistic cultures. So the majority of behaviors may still be under attitudinal control even in the East.

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