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# The Measurement of Independent and Interdependent Self-Construals

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*Following concepts introduced by Markus and Kitayama, this study describes the theoretical and empirical development of a scale to measure the strength of an individual's interdependent and independent self-construals. These two images of self are conceptualized as reflecting the emphasis on connectedness and relations often found in non-Western cultures (interdependent) and the separateness and uniqueness of the individual (independent) stressed in the West. It is argued that these two images of self can and do coexist in individuals and that they can be measured. A 24-item Self-Construal Scale measuring two dimensions of self-image is presented. The two distinct dimensions of the scale were supported in confirmatory factor analyses of two multiethnic samples of college students. The scale was found to have satisfactory reliability and validity. Its implications and potential applications are discussed.*

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The prototypical view of self in North American and Asian cultures varies markedly. Markus and Kitayama (1991) delineated these two views of the self in relation to the collective. They proposed that people in the West hold an independent view of the self that emphasizes the separateness, internal attributes, and uniqueness of individuals (the independent self-construal) and that many non-Western peoples hold an interdependent image of self stressing connectedness, social context, and relationships (the interdependent self-construal). Similar distinctions between cultures have been made by a number of scholars (Berry, 1979; Hofstede, 1980; Kagitcibasi, in press; Kluckhohn & Strodtbeck, 1961; Miller, 1984; Miller & Bersoff, this issue; Shweder & Bourne, 1984; Triandis, 1988). In particular, the concepts of individualism and collectivism (Hofstede, 1980; Triandis, 1988; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988) have been used frequently to explain differences observed between cultural groups (e.g., Bond & Venus,

1991; Leung & Bond, 1984; see Singelis, in press, for a review of communication-related literature).

Like independent and interdependent self-construals (individual difference variables), individualism-collectivism (a cultural variable) is concerned with the relationship of the individual to the collective. The central meaning of individualism is giving priority to personal goals over in-group goals. Collectivism places an emphasis on subordinating personal goals to those of the in-group (Triandis, 1988). Individualism has been associated with most northern and western regions of Europe, North America (especially the United States), and Australia. Cultures in Asia, Africa, South America, and the Pacific islands region have been identified as collective. These are respectively the same regions where independent and interdependent self-construals are prototypical views of self (Markus & Kitayama, 1991). The importance and power of these constructs for cognition, emotion, and motivation in Western and non-Western cultures are evidenced by the extensive array of studies reviewed by Markus and Kitayama (1991). The purpose of this study was to develop a brief paper-and-pencil instrument to measure the strengths of an individual's independent and interdependent self-construals.

The article is divided into five parts. First, the constructs of independent and interdependent self-construals are reviewed. Then it is argued that these two views of

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the self can and do coexist in individuals. Next, some of the related measurement attempts are briefly reviewed. The fourth portion explains the development and testing of a scale to measure these two aspects of self. Finally, the implications of the findings are discussed, and suggestions are made for further research.

#### SELF-CONSTRUALS

The concept of self is central to an individual's perceptions, evaluations, and behaviors (Geertz, 1975; Markus & Kitayama, 1991; Marsella, DeVos, & Hsu, 1985; Triandis, 1989). Cultural norms, values, and beliefs are powerful forces in shaping an individual's concept of self (Marsella et al., 1985; Shweder & Bourne, 1984; Triandis, 1989). Numerous aspects of self-image, of course, are affected by culture, but the focus in this study will be on what people "believe about the relationship between the self and others and, especially, the degree to which they see themselves as *separate* from others or as *connected* with others" (Markus & Kitayama, 1991, p. 226). Self-construal is conceptualized here as a constellation of thoughts, feelings, and actions concerning one's relationship to others, and the self as distinct from others. The following descriptions of independent and interdependent self-construals are summarized from Markus and Kitayama (1991). The constructs are discussed separately and in their extreme. Of course, in individuals, what seem to be reified here exist only as tendencies of varying strength.

##### *Independent Self-Construal*

Independent self-construal is defined as a "bounded, unitary, stable" self that is separate from social context. The constellation of elements composing an independent self-construal includes an emphasis on (a) internal abilities, thoughts, and feelings, (b) being unique and expressing the self, (c) realizing internal attributes and promoting one's own goals, and (d) being direct in communication. When thinking about themselves, individuals with highly developed independent self-construals will have as a referent their own abilities, attributes, characteristics, or goals rather than referring to the thoughts, feelings, or actions of others. Similarly, when thinking about others, they will consider the other's individual characteristics and attributes rather than relational or contextual factors. Those with well-developed independent self-construals will gain self-esteem through expressing the self and validating their internal attributes. The independent self tends to express itself directly, to say what it thinks. It is one's inner attributes that are most salient for the independent self-construal in "regulating behavior and that are assumed, both by the actor and by the observer alike, to be diagnostic of the actor" (Markus & Kitayama, 1991, p. 227).

##### *Interdependent Self-Construal*

An interdependent self-construal is defined as a "flexible, variable" self that emphasizes (a) external, public features such as statuses, roles, and relationships, (b) belonging and fitting in, (c) occupying one's proper place and engaging in appropriate action, and (d) being indirect in communication and "reading others' minds." When individuals with highly developed interdependent self-construals think about themselves or others, there is a sense that the self and others are intertwined. In addition, both self and other are not separate from the situation but are molded by it. Harmonious interpersonal relationships and the ability to adjust to various situations are sources of self-esteem for the interdependent self-construal. Therefore, the interdependent self tends to communicate indirectly and to be attentive to others' feelings and unexpressed thoughts—that is, to "read others' minds." In contrast to the independent self, the interdependent self depends on others, his or her relations with others, and contextual factors to regulate behavior.<sup>1</sup> Because connecting with others and fitting in are primary sources of self-esteem, the situation and others present become "actively and continuously" integrated into the interdependent self.

Markus and Kitayama (1991) posited that these two types of self are exemplified in Asian (collective) and Western (individualist) cultures. It is proposed here that individuals (in any culture) have both independent and interdependent self-construals and that these can be measured.

#### THE DUAL SELF

##### *Theoretical Evidence for Two Selves*

Triandis (1989) presented an explanation of the influence of culture on behavior. He employed the concept of self as a mediating variable between culture and individual behavior. Following Greenwald and Pratkanis (1984) and Baumeister (1986), Triandis (1989) conceptualized each person's self as having three aspects: (a) the *private self*—cognitions that involve traits, states, or behaviors of the person; (b) the *public self*—cognitions concerning the generalized other's view of the self; and (c) the *collective self*—cognitions concerning a view of the self that is found in a collective. These three aspects of the self form a universe of cognitions from which an individual draws (or samples) when confronted with social situations. The probability that a particular aspect of self will be referenced is a function of its complexity or development (i.e., the number of cognitions that constitute that dimension of self) and the situation. If, for example, the private<sup>2</sup> aspect is sampled primarily, that is an indication of idiocentric (independent) ten-

dencies. Sampling of the collective and public elements suggests allocentric (interdependent) tendencies. Only the private and collective selves will be considered here.

Triandis (1989) proposed that culture affects the relative development of these selves. That is, collectivist cultures encourage the development of many cognitions that refer to a group or collective, thus increasing the chances that these cognitions will be sampled frequently by the individual, whereas individualist cultures nurture the growth of cognitions that refer to the individual's traits and states. Culture, then, affects behavior both by influencing self-image and by defining situations. Imagine a student's father who gives advice that is contrary to the student's desires about which major to pursue at university. The student who has a well-developed private self will be more likely to tap that self than the collective self. In making the decision, he or she will find primarily cognitions about individual rights, the value of autonomy, personal preferences, and so on. If the culture also defines the situation as one in which the independent self should dominate, the father's advice probably will not have a strong influence. In a collectivist culture, a student facing the same situation will likely have a well-developed interdependent self that contains many cognitions about duty to family, the wisdom of elders, the need for harmony, and so on. In addition, the situation will probably be defined by this student as one that demands attention to the collective self. This student will tend to follow the father's advice, even when the independent self is opposed. Notice that this model does not presuppose the development of one self to the exclusion of the other. Circumstances, such as having parents from different cultures or intercultural experience (and perhaps some yet-to-be-identified circumstances), may contribute to the development of both the private and collective selves.

In the example above, one could imagine a student in whom both selves are well developed. In such a case, the student may experience a great deal of intrapersonal conflict. The independent self that wants to follow its individual desires will be in conflict with the interdependent self that feels a strong desire to maintain harmony and a sense of duty to the family (see Roland, 1988, for case studies involving this type of conflict). The outcome of such a conflict may depend on a variety of factors other than self-concept, such as the individual characteristics of the father (e.g., his strength and persistence) or the strength of the individual's cultural definition of the situation (perhaps related to cultural identification). However, the coexistence of two well-developed self-construals is not necessarily problematic. It may also be quite useful when one moves between cultures (Cross & Markus, 1991, described below; see Discussion). The influences of culture and situation on

the sampling of cognitions about the self have been supported empirically.

#### *Empirical Evidence for Two Selves*

In several experiments designed to illuminate the cognitive structure of the private and collective selves, Trafimow, Triandis, and Goto (1991) showed that private and collective self-cognitions are encoded separately in memory. To determine the number of private or collective cognitions produced by a respondent, they used the Kuhn and McPartland (1954) self-attitudes instrument. This instrument requires respondents to complete 20 sentences that begin "I am." Responses that refer to demographic categories or groups with which the subject experiences a common fate are coded as collective. Responses referring to personal qualities, attitudes, or beliefs are coded as private. Respondents from two cultures (Chinese and North American) were given one of two primes before they completed the instrument. In the independent prime, they were asked to think of how they are different from their friends and family. The collective prime asked them to think of how they were similar to friends and family. Trafimow et al. (1991) found that both culture and the nature of the prime significantly affected the type of cognition produced. Chinese produced more collective cognitions than North Americans, and those primed with an individualistic stimulus gave more private responses than those who received a collectivist prime. These results are consistent with Triandis's (1989) conceptualization of the effect of culture on self-concept. The effect of complexity or development of the self-concept was represented by the effect of culture on the type of cognition produced; the prime represented situational influences.

Two other studies have recently shown support for the proposition that some individuals may have two well-developed self-concepts. Bhawuk and Brislin (1992) found that one measure of cultural sensitivity was an individual's ability to modify his or her behavior according to the cultural context—collectivist or individualist. The ability to switch between collectivist and individualist modes suggests the existence of two well-developed self-concepts. Cross and Markus (1991) found support for two dimensions of self in their study of stress and coping behavior among American and East Asian exchange students. Using the constructs of interdependent and independent self-construals, they found that the East Asian students had better developed interdependent self-construals than their American counterparts but were similar to the Americans in the development of their independent self-construals. The authors called this pattern a bicultural self-system. The East Asian students who had more developed independent selves and who perceived the interdependent aspects of self as less

important reported less stress than other East Asian students. Cross and Markus (1991) explain the results by suggesting that the ability to cope with the individualist situations of an American university reduced stress and was associated with a well-developed independent self. Stress was reduced further in those students who were less dependent on the support normally received from in-group members in their own culture (i.e., those low on interdependence).

The assertion of distinct measurable private and collective self-concepts was supported by Yamaguchi, Kuhlman, and Sugimori (1992). Using two North American samples and a Korean sample, they demonstrated that a two-factor model was the best fit for their individualist and collectivist items. The items concentrated on group relations and therefore did not cover the variety of characteristics composing construals of self. In the U.S. samples, the two subscales were not correlated ( $r = .04$ , n.s.). The Korean sample showed a moderate negative correlation between the two subscales (from  $r = -.17$ ,  $p < .01$ , to  $r = -.34$ ,  $p < .01$ , across three target groups—work, peer, and family). In the U.S. samples, affiliative tendency was positively associated with collectivism but not with individualism. Need for uniqueness was positively correlated with individualism but not with collectivism. Yamaguchi et al. (1992) concluded that low collectivism is not equivalent to individualism.

Triandis (1994) suggests that the basic advance from Hofstede's (1980) formulation of individualism-collectivism is "that we are both allocentric [interdependent] and idiocentric [independent]." Depending on the development of the two aspects of self and the situation, we may refer to one or the other of these selves. "In some cultures more situations are sampled allocentrically, and in other cultures more are sampled idiocentrically" (Triandis, 1994, p. 46). In sum, it seems likely that two aspects of self in relation to the collective can coexist, even though most prior attempts to measure individualism-collectivism have assumed a single bipolar dimension.

#### PREVIOUS MEASURES

Several studies (Hui, 1988; Triandis et al., 1986; Triandis, McClusker, & Hui, 1990) have addressed the measurement of the cultural construct individualism-collectivism. Others have sought to measure the psychological counterparts of individualism (idiocentrism) and collectivism (allocentrism) (Triandis, Leung, Villareal, & Clack, 1985; Yamaguchi et al., 1992) or the constructs of independent and interdependent self-construals (Cross & Markus, 1991).

Hui's (1988) INDCOL Scale is composed of 63 items divided into six subscales (e.g., parents, neighbors,

friend) measuring "the target-specific construct of individualism-collectivism" (p. 32). Subscales are also summed to give a General Collectivism Index (GCI). The scale has been shown to have convergent and divergent validity (see Hui, 1988; Triandis et al., 1985) but is marred by the lack of internal reliability (average Cronbach alpha in two studies = .62 and .58, reported in Hui, 1988). Surprisingly, Hong Kong Chinese students were measured as significantly more individualistic than American university students in Illinois.

Triandis et al. (1985) developed a 132-item instrument using several types of items and scales to measure the psychological dimension of idiocentrism-allocentrism in a United States university sample. The nine subscales addressed topics such as perceived similarity to in-groups, paying attention to others, work-related requests, and feeling honored if another person were to win the Nobel Prize. Like the INDCOL, this instrument considered the target-specific nature of the construct. The Chinese Value Scale (Chinese Culture Connection, 1987) was used to demonstrate convergent validity. The reliabilities of the subscales were more than adequate; however, the sheer size of the instrument is a disadvantage. The hypothetical questions seem to measure cultural norms rather than individual differences, and many items tap experiences that are not familiar to the average student (e.g., "Would you make a long-term investment that would benefit your great-grandchildren?").

Triandis et al. (1986) used 21 items to measure individualism-collectivism in nine countries. A pancultural exploratory factor analysis revealed four factors that were considered to be etic aspects of the construct: self-reliance with hedonism, separation from in-groups, family integrity, and interdependence with sociability. These factors were not examined separately; the items were totaled to give an overall score. The standardized country scores correlated .73 with Hofstede's (1980) individualism scores for the nine countries. No reliabilities were reported for the scale. This instrument seemed to capture the bipolar differences in individualism-collectivism, but is perhaps less useful as a measure of the two dimensions that are theorized to compose self-construals.

Triandis et al. (1990) used five methods to assess cultural differences in individualism-collectivism: (a) social content of the self (using the Kuhn & McPartland, 1954, "I am . . ." method described previously), (b) judgments of the homogeneity of in-groups and out-groups, (c) attitudes, (d) values, and (e) perceptions of social behavior as a function of social distance. The use of the Kuhn and McPartland method is of interest because it addresses the issue of self-concept that is central to the present investigation. Despite distinguishing well between cultures, this method is of less value in determin-

ing individual differences, because the mode of collective responses in many U.S. samples is zero (H. C. Triandis, personal communication, May 1992). In general, the focus on cultural differences in the studies cited above makes them less useful as individual-level measures.

Yamaguchi et al. (1992) conceptualized and measured individualism and collectivism as separate individual difference variables using eight items. As described previously, their scale focused on the relationship of an individual to a group. This study was an important step forward because it conceptualized two dimensions of self and measured them separately. However, the focus on the group and somewhat low reliabilities (average Cronbach alpha = .63 for collectivist items in the United States) need to be improved to make this scale applicable to the measurement of self-construals.

Cross and Markus (1991) employed 10 items (originally from the Breckler, Greenwald, & Wiggins, 1986, Ego-Task Analysis Scale and from Yamaguchi, 1990). The independent and interdependent items focused on the value of group relations and personal qualities, respectively. Reliabilities for these measures were similar to those obtained by Yamaguchi et al. (1992), with Cronbach alphas ranging from .62 to .78. In focusing on values, this instrument did not tap the range of feelings and behaviors that contribute to self-construals. The goal in the present study was to develop a scale that would reliably measure individual differences that define independent and interdependent self-construals.

## METHOD

### *Item Development*

Items were developed to measure the constellation of thoughts, feelings, and actions composing independent and interdependent self-construals as described previously. Initially, items were culled from the instruments described above. They included 10 items used by Cross and Markus (1991) and Yamaguchi (1994). Additional items were drawn from the scale used by Bhawuk and Brislin (1992). Items were rewritten to focus on the individual's self-construal as well as to make them more suitable for a student sample. For example, the INDCOL (Hui, 1988) item "Young people should take into consideration their parents' advice when making education/career plans" was rewritten as "I should . . . my parents' advice. . . ." Other items were written by the author to tap additional aspects of independent and interdependent self-construals (e.g., "Speaking up during a class is not a problem for me" to measure directness and verbal self-expression). Items were written (or rewritten) to be clear and concise and to tap behaviors in the realm of a normal student's experience. All together, 45 items were included in the initial Self-Construal Scale (SCS).

### *Instrument*

The 45 initial SCS items were randomly ordered as a single scale. Respondents were asked to indicate their agreement with the items in a 7-point Likert-type format (1 = *strongly disagree*, 7 = *strongly agree*). A second part of the instrument included four scenarios depicting brief social conversations. Each scenario consisted of three parts: (a) a short description of the people; (b) a description of the setting of the interaction; (c) a verbatim dialogue containing an exchange of greetings, a request, and a reply. Dialogues in the four scenarios were extremely similar. Descriptions of the conversants and settings were manipulated to vary the context. Respondents were asked two questions to assess their perception of the degree to which the situation had influenced the conversant's reply to a request (for a full description of the scenarios and the associated hypotheses, see Singelis & Brown, in press). Members of collectivist cultures have been shown to make greater attributions to the influence of situation than individualists (Miller, 1984; Shweder & Bourne, 1984), and so it was hypothesized that an individual's interdependence score would be positively associated with greater attributions to the situation.

### *Sample*

The sample consisted of undergraduate students from the University of Hawaii at Manoa ( $N = 364$ , mean age = 21.63).<sup>3</sup> Fifty-seven percent (204) were female, 43% (154) were male, and 6 respondents did not indicate their sex. The ethnic-racial makeup of the sample (self-reported) was as follows: African American, 8 (2.2%); Caucasian, 49 (13.77%); Chinese, 43 (12.0%); Filipino, 32 (8.9%); Hawaiian or part Hawaiian, 26 (7.3%); Japanese, 122 (34.1%); Korean, 13 (3.6%); Samoan, 2 (0.6%); mixed, 20 (5.6%); other, 43 (12.0%). Six respondents did not indicate an ethnic background. Even though this mix of ethnicities is not typical of most U.S. universities, it was advantageous in that a wide range of self-construals were thought to be represented in the sample. Participants volunteered and completed the instrument in class for extra credit.

## RESULTS

### *Exploratory Factor Analysis*

A principal components factor analysis was undertaken to determine which of the 45 items were most useful in measuring the two dimensions of self. A two-factor solution with a varimax rotation was imposed a priori according to the theoretical framework suggested by the empirical work on "two selves" described above. Items not loading highly (greater than .35) on either factor or loading approximately equally on the two fac-

TABLE 1: Final Items and Factor Loadings, Self-Construal Scale

	Sample 1 (N = 360)				Sample 2 (N = 160)			
	<i>F1</i>	<i>F2</i>	<i>Lx</i>	<i>MI</i>	<i>F1</i>	<i>F2</i>	<i>Lx</i>	<i>MI</i>
	Cronbach $\alpha$ = .73				Cronbach $\alpha$ = .74			
Interdependent items								
1. I have respect for the authority figures with whom I interact	.48	-.00	.40	0.00	.49	.15	.44	0.71
2. It is important for me to maintain harmony within my group	.55	-.11	.48	1.63	.31	.27	.32	5.96
3. My happiness depends on the happiness of those around me	.48	-.11	.40	1.35	.48	.01	.43	0.04
4. I would offer my seat in a bus to my professor	.42	.17	.34	4.73	.25	.07	.23	0.04
5. I respect people who are modest about themselves	.42	.21	.32	10.84	.43	.15	.35	2.23
6. I will sacrifice my self-interest for the benefit of the group I am in	.56	.00	.52	1.35	.61	.07	.56	0.42
7. I often have the feeling that my relationships with others are more important than my own accomplishments	.63	-.11	.58	1.43	.52	-.10	.43	1.00
8. I should take into consideration my parents' advice when making education/career plans	.43	.06	.36	0.75	.52	-.02	.46	0.52
9. It is important to me to respect decisions made by the group	.63	.02	.58	0.71	.63	.09	.60	0.43
10. I will stay in a group if they need me, even when I'm not happy with the group	.47	-.03	.40	0.05	.58	.07	.54	1.31
11. If my brother or sister fails, I feel responsible	.45	-.10	.36	0.83	.57	-.16	.47	2.77
12. Even when I strongly disagree with group members, I avoid an argument	.44	-.24	.38	9.09	.55	-.34	.44	13.70
	Cronbach $\alpha$ = .69				Cronbach $\alpha$ = .70			
Independent items								
13. I'd rather say "No" directly, than risk being misunderstood	-.06	.43	.35	0.12	.10	.43	.32	0.24
14. Speaking up during a class is not a problem for me	-.19	.47	.39	5.04	-.09	.55	.41	4.73
15. Having a lively imagination is important to me	.05	.47	.40	2.31	.32	.44	.48	4.49
16. I am comfortable with being singled out for praise or rewards	-.16	.45	.37	2.74	-.05	.46	.35	1.52
17. I am the same person at home that I am at school	.11	.47	.35	3.69	.13	.25	.10	3.17
18. Being able to take care of myself is a primary concern for me	.05	.44	.36	1.06	.19	.43	.38	1.45
19. I act the same way no matter who I am with	.13	.35	.27	4.79	.26	.31	.26	3.98
20. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am	-.06	.40	.33	0.00	-.17	.34	.25	3.35
21. I prefer to be direct and forthright when dealing with people I've just met	-.09	.55	.50	0.13	-.14	.66	.52	9.74
22. I enjoy being unique and different from others in many respects	-.18	.58	.56	5.49	.14	.76	.74	0.01
23. My personal identity independent of others, is very important to me	.12	.52	.45	6.60	.17	.61	.57	0.36
24. I value being in good health above everything	-.03	.51	.40	0.32	.35	.30	.29	5.19

NOTE: F1 and F2 = factor loadings for promax (oblique) rotation of 24 final items; F1 = interdependent; F2 = independent; Sample 1 interfactor correlation = -.06, subscale score correlation = -.04; Sample 2 interfactor correlation = .04, subscale score correlation = .16. Lx = lambda coefficients (standardized loadings) for target factors in LISREL CFA two-factor model (freely estimated factor correlation); MI = modification indexes for items in CFA (i.e., indicators of potential loadings on nontarget factor).

tors were dropped. Because in some samples (Yamaguchi et al., 1992) the two aspects of self-construal were correlated, a second analysis of all 45 items with an oblique (promax) rotation was used to verify item selection. The second analysis was consistent with the first, and so a total

of 24 items (12 for each factor) was selected for the final scale (Table 1).

Table 1 shows the loadings for a promax (oblique) rotation of the 24 final items (after other items were deleted). The orthogonality of the dimensions in this

TABLE 2: Comparison of Models, Sample 1

	$\chi^2$	df	p	$\Delta\chi^2$	p	$\chi^2/df$	GFI	AGFI	RMR
One- and two-factor models compared									
One-factor model	988.84	252	<.01	—	—	3.92	.774	.731	.102
Two-factor model	690.93	251	<.01	297.91	<.01	2.75	.853	.824	.076
Two-factor models compared									
Freely estimated factor correlation	690.93	251	<.01	—	—	2.75	.853	.824	.076
Factor correlation constrained to 1.0	828.04	252	<.01	137.11	<.01	3.29	.835	.803	.171
Factor correlation constrained to -1.0	782.88	252	<.01	91.95	<.01	3.11	.837	.806	.142
Factor correlation constrained to 0.0	692.52	252	<.01	1.59	n.s.	2.75	.852	.824	.077

sample is indicated by these clear loadings and is supported by the fact that the two subscale scores (mean of the 12 items on each) were virtually uncorrelated ( $r = -.044$ ). The two factors accounted for 25.1% of the total variance. Though less than ideal, Cronbach alpha reliabilities for the independent and interdependent subscales were improved from previous measurement efforts to an acceptable .69 and .73, respectively.

Even though the exploratory analysis gave strong support for the hypothesis that the items measured two factors, additional evidence was sought. Following a methodology similar to that of Yamaguchi et al. (1992), a confirmatory factor analysis (CFA) was performed.

#### Confirmatory Factor Analysis

Using LISREL 7, a maximum likelihood CFA was undertaken to compare a one-factor model with a two-factor model and to assess the overall fit of the two-factor model. The correlation between factors was freely estimated in the two-factor model. The results (Table 2) showed a better fit for the two-factor model,  $\chi^2(251) = 690.93$ ,  $\chi^2/df = 2.75$ , AGFI = .824, than the one-factor model,  $\chi^2(252) = 988.84$ ,  $\chi^2/df = 3.92$ , AGFI = .731, with a significant  $\Delta\chi^2(1) = 297.91$ ,  $p < .01$ . Lambda coefficients (item loadings) for the two-factor model are reported in Table 1.

In assessing the fit of the two-factor model, the estimated correlation parameter between the two factors was manipulated, first being fixed to 1.0, then to -1.0, and finally to 0.0 (see Anderson & Gerbing, 1988; Jöreskog, 1971). The resulting  $\chi^2$  values were compared with those where the parameter was freely estimated. Chi-square difference tests (Table 2) indicated that the orthogonal model fit the data as well as the unconstrained model,  $\Delta\chi^2(1) = 1.59$ ,  $p = \text{n.s.}$  When the factors were constrained to 1.0 or -1.0, the fit was significantly degraded:  $\Delta\chi^2(1) = 137.11$ ,  $p < .01$ , for positive and  $\Delta\chi^2(1) = 91.95$ ,  $p < .01$ , for negative correlation. Thus divergent validity for the two factors was established, and furthermore, it was concluded that in this sample they were not significantly different from orthogonal.

Though clearly superior to the one-factor model, the two-factor model seems only adequate. The  $\chi^2/df$  value of 2.75 falls within a range of acceptable values (2 to 5 as suggested by Marsh & Hocevar, 1985) but does not reach the less-than-2 level proposed by Byrne (1989). Likewise, the goodness-of-fit indexes are acceptable but not excellent. An inspection of the modification indexes (MI, Table 1) reveals only one that is moderately high. The goodness-of-fit indexes may have been adversely affected by the large number of indicators (12) per factor (Anderson & Gerbing, 1984). In addition, the chi-square value is sensitive to sample size, and therefore the  $\chi^2/df$  value is larger than might be expected for a smaller sample.

Because the model described above was tested in a fallback design and may have taken advantage of chance covariances, a second sample was given the SCS to determine whether the superiority of the two-factor model would be replicated.

#### Confirmatory Factor Analysis, Sample 2

The second sample consisted of students ( $N = 165$ , mean age = 20.32) from the same university population as the first. Ethnic and gender composition was similar to that of the initial sample. Respondents received only the 24 final SCS items, again randomly ordered. The scenarios described above were not part of the instrument. Cronbach alpha reliabilities for the two subscales were equivalent to those in Sample 1: .70 for the independent items and .74 for the interdependent items. With few exceptions, lambda coefficients were also similar to those in Sample 1 (Table 1). The two subscale scores were correlated  $r = .16$ ,  $p = \text{n.s.}$  The comparison of a one-factor and a two-factor model, using LISREL 7, was quite similar to that for the original data (Table 3). The two-factor model,  $\chi^2(251) = 469.16$ ,  $\chi^2/df = 1.87$ , AGFI = .772, was a better fit than the one-factor model,  $\chi^2(252) = 598.09$ ,  $\chi^2/df = 2.37$ , AGFI = .687;  $\Delta\chi^2(1) = 128.93$ ,  $p < .01$ . The constraining of the correlation parameter between the factors also yielded similar results (Table 3). It was therefore concluded that the

TABLE 3: Comparison of Models, Sample 2

	$\chi^2$	df	p	$\Delta\chi^2$	p	$\chi^2/df$	GFI	AGFI	RMR
One- and two-factor models compared									
One-factor model	598.09	252	<.01	—	—	2.37	.737	.687	.109
Two-factor model	469.16	251	<.01	128.93	<.01	1.87	.809	.772	.093
Two-factor models compared									
Freely estimated factor correlation	469.16	251	<.01	—	—	1.87	.809	.772	.093
Factor correlation constrained to 1.0	506.59	252	<.01	37.43	<.01	2.01	.797	.758	.156
Factor correlation constrained to -1.0	540.15	252	<.01	70.99	<.01	2.14	.790	.750	.193
Factor correlation constrained to 0.0	472.66	252	<.01	3.50	n.s.	1.88	.809	.772	.097

factors were orthogonal in this sample as well. In short, the two-factor structure of the scale was replicated in the second sample.

#### Validity

There are a number of indications that the SCS is a valid measure of self-construals. First, the face validity for the two subscales is quite high. The items (Table 1) focus directly on the characteristics that define the constructs. For example, the item "My happiness depends on the happiness of those around me" clearly assesses the respondent's connectedness with others, the sense of "being intertwined" that is central to the interdependent self. Similarly, "I enjoy being unique and different from others in many respects" taps an individual's sense of being separate from others and the concern with uniqueness of self. These are traits of the independent self. The scale covers a variety of feelings, behaviors, and thoughts that define self-construals (e.g., directness, internal attributes, roles, and relationships with groups). This range contributes to the content validity of the scale.

**Construct validity.** To test the construct validity, Asian Americans (combined Japanese, Chinese, Korean, and Filipino ethnic groups) and Caucasian Americans were compared. Differences that are consistent with Markus and Kitayama's (1991) characterizations of Asians as interdependent and North Americans as independent would indicate validity. The items on each subscale were averaged to give individuals an independent and an interdependent score, higher scores indicating a stronger self-construal. Each dimension was approximately normally distributed in both samples (S1: independent  $M = 4.68$ ,  $SD = 0.73$ , interdependent  $M = 4.79$ ,  $SD = 0.76$ ; S2: independent  $M = 4.83$ ,  $SD = 0.75$ , interdependent  $M = 4.84$ ,  $SD = 0.80$ ). As expected, Asian Americans (S1:  $n = 208$ ,  $M = 4.91$ ; S2:  $n = 95$ ,  $M = 4.94$ ) were more interdependent than Caucasian Americans (S1:  $n = 49$ ,  $M = 4.37$ ; S2:  $n = 30$ ,  $M = 4.47$ ),  $p < .01$ . Caucasian Americans (S1:  $n = 49$ ,  $M = 5.14$ ; S2:  $n = 32$ ,  $M = 5.06$ ) were higher on the independent dimension than Asian Americans (S1:  $n = 210$ ,  $M = 4.55$ ; S2:  $n = 93$ ,  $M = 4.73$ ),  $p < .01$  for Sample 1 and  $p < .05$  for Sample 2. These

results indicate a measure of construct validity and have been replicated in several studies (Singelis & Sharkey, in press; Singelis, Triandis, Bhawuk, & Gelfand, 1994).

**Predictive validity.** Making attributions to situational or contextual influences is characteristic of collectivist cultures (Miller, 1984; Shweder & Bourne, 1984) and is associated with interdependent self-construals (Markus & Kitayama, 1991). If the SCS has predictive validity, one would expect an individual's interdependent subscale score to be positively associated with the degree of attributions to the effects of situational influences.

Recall that respondents in Sample 1 were presented with scenarios describing a conversation between two persons. Two questions ( $T = .82$ ) measured the perception of situational influence on the reply to a request (e.g., "The situation had a strong influence on what Lee said"). The Likert-type responses (1 = *strongly disagree*, 7 = *strongly agree*) to the two situation questions were averaged across the four scenarios to give an overall measure of the tendency to make attributions to the influence of situation.

In predicting attributions to the situation, the interdependent subscale score alone,  $F(1, 253) = 8.59$ ,  $R^2 = .033$ ,  $p < .01$ , was better than ethnic group alone,  $F(1, 255) = 4.68$ ,  $R^2 = .018$ ,  $p < .05$ . Consistent with prior research and according to expectations, Asian Americans ( $M = 4.73$ ,  $SD = 1.09$ ) and those with higher interdependence scores tended to attribute more influence to the situation than Caucasian Americans ( $M = 4.35$ ,  $SD = 1.14$ ) and those with lower interdependence scores. When both variables were in the general linear model (GLM) and the variance accounted for by ethnic group was partialled out, the interdependent subscale was still significant in predicting attributions to the situation,  $F(1, 252) = 5.79$ ,  $p < .05$ , partial  $r = .14$ ,  $R^2 = .019$ . When the effect of interdependence was covaried out of the model, mean attributions to situation by the Caucasian Americans ( $M = 4.45$ ) did not differ significantly from those by Asian Americans' ( $M = 4.71$ ,  $p = \text{n.s.}$ ). Thus between-group differences can be attributed to interdependence at the individual level, as measured by the SCS. These individual differences parallel previously observed cul-



tural differences (Miller, 1984; Shweder & Bourne, 1984). The fact that independence scores also varied between ethnic groups but were not associated with attributions to the situation is an indicator of the divergent validity of the two SCS subscales. It may be that independence is associated with attributions to the person. Unfortunately, this was not tested.

*Methodological questions.* The validity and reliability of the SCS seem adequate. Nevertheless, there are several concerns that should be raised. First, the samples in this study were from Hawaii. Asian culture may be stronger here than in the contiguous 48 states. However, differences associated with ethnic groups in Hawaii should be even greater when comparisons are made between national groups. In addition, the absence of African Americans and Hispanic Americans makes the results less generalizable within the United States. One would expect Hispanic Americans to score higher on the interdependent measure than Caucasians (Triandis, Marin, Lisansky, & Betancourt, 1984). African Americans may score high on both dimensions because of their integration of an interdependent orientation with the emphasis on the individual that prevails in Anglo-American culture (see discussion of acculturation below). All these are empirical questions that remain to be answered. A potentially more serious methodological threat concerns response bias.

Astute readers will no doubt have noticed that there are no reversed items on the SCS. This was a result of the item loadings rather than occurring by design. For example, it was not known a priori whether the item "I will sacrifice my self-interest for the benefit of the group I am in" would load positively on the interdependence factor or would load negatively on the independence factor and hence be a reversed item there. In any case, the possibility that the scores are affected by an acquiescence bias must be explored.

The tendency to endorse an item and its own negation (e.g., "happy" and "not happy") is agreement acquiescence. The tendency to endorse all qualities (e.g., an item and its conceptual opposite—"happy" and "sad") is acceptance acquiescence (Bentler, Jackson, & Messick, 1971). Writing some negatively worded items and reverse scoring them would control for agreement acquiescence, but this does not appear to be a problem for the SCS, because it is a personality (vs. attitude) measure that uses easily understandable, concrete, "content saturated" items (Bentler et al., 1971; Paulhus, 1991; Ray, 1983; Trott & Jackson, 1967). Acceptance acquiescence is more problematic. Bentler et al. (1971) suggest using affirmatively worded items that are conceptual opposites to control for acceptance acquiescence. However, the theoretical stance and empirical evidence that independence and interdependence do not form a single

bipolar dimension preclude forming conceptually opposite affirmations. If independence is not the opposite of interdependence, then none can be found. As noted above, "not interdependent" items control only for agreement acquiescence. Thus there seems to be no reasonable way to control for acceptance acquiescence in this type of scale. In fact, the extent to which individuals endorse both dimensions of self is of interest (see Discussion). If, however, there were a significant amount of acquiescence, one would expect a stronger correlation between the two subscales than was observed (S1:  $r = -.04$ ; S2:  $r = .16$ ). Still, the extent to which results are the effect of bias and not content can be determined only by the ability of the scale to predict accurately in accord with the constructs it purports to measure. Studies have found that, as expected, interdependence is positively associated with embarrassability (Singelis & Sharkey, in press), collectivism (Singelis et al., 1994), and emotional contagion (Singelis, 1994). Independence has been positively associated with individualism (Singelis et al., 1994) and negatively associated with embarrassability (Singelis & Sharkey, in press), social anxiety (Sharkey & Singelis, 1994), and communication apprehension (Singelis, 1993).

## DISCUSSION

"No man is an island—he is . . . a Janus-faced entity who, looking inward sees himself as a self-contained unique whole, looking outward as a dependent part" (Koestler, 1967, p. 56). The present study has confirmed this vision of individuals as two-sided. It is possible to define cultural groups along a continuum of collectivism (interdependence) and individualism (independence). But when the unit of analysis is the individual, the present study has shown that one must consider these dimensions separately. This assertion has important implications for acculturation and intercultural interactions that are increasingly a part of today's world.

Successful intercultural interaction depends in part on two factors: (a) making isomorphic attributions with people from other cultures (Brislin, Cushner, Cherrie, & Yong, 1986) and (b) being able to modify behavior appropriately and successfully when moving from one culture to another (Bhawuk & Brislin, 1992). Making isomorphic attributions (i.e., seeing the causes of behavior in the same way as one's cultural counterpart) involves understanding the cultural assumptions that guide behavior in another culture and applying them as people of that culture do. If one's own self-construal is similar to the prototype of the target culture, this task may be greatly facilitated. It may be very natural and effortless to make attributions isomorphic with a person whose self-concept is similar to one's own. A person from

an individualist culture who nevertheless has a well-developed interdependent self will tend to make attributions similar to those made by members of a collectivist culture where a highly developed interdependent self is typical.

In addition to isomorphic attributions, similarities in behavior may facilitate intercultural interactions. Bhawuk and Brislin (1992) proposed that intercultural sensitivity could be measured by assessing an individual's ability to perceive what behavior is appropriate in another culture and to modify his or her behavior accordingly. To know what behaviors are appropriate, it will help to understand the cultural assumptions behind behaviors and to focus on the features of situations that are culturally mandated to guide behavior. Clearly the ability to understand the assumptions of another culture will be facilitated by a self-concept that is in harmony with those assumptions. For example, a Korean who visits America will certainly have an easier time understanding the reasons Americans express themselves directly if he or she has a well-developed independent self-construal that focuses on individual traits and abilities. The underlying principle here is that if one's own guide to behavior (i.e., self-construal) mirrors the cultural guides to behavior (norms and rules) in the target culture, it will be easier to adapt to the new norms and rules. Adapting to new cultural environments is also central to the acculturation process.

The model of acculturation described by Berry and Kim (1988) posits four modes that are based on an individual's willingness and ability to change, add, and/or retain cultural identity. In many senses this can be understood as a process of adjusting (or not) one's self-image. In the United States, those who (a) assimilate will replace their self-image with the type that is most common—in other words, an independent self-construal. A person who (b) integrates (from a collectivist culture) will develop an independent self in addition to his or her interdependent self, thus forming the bicultural self-system. The choice to retain the traditional interdependent self in lieu of assimilation or integration is called (c) separation. Finally, (d) marginalization, in the United States, may be the result of a degradation of the interdependent self without its replacement by an independent self-image. This is only one of the many hypotheses that the present study suggests.

The ability to measure the independent and interdependent dimensions of self may be useful in determining whether previously established cultural differences have corresponding individual variation within cultures. For instance, previous research demonstrated that when making requests, Koreans and North Americans differed in their perceptions of conversational constraints (Kim, 1993). A second study (Kim, Sharkey, & Singelis, 1994)

showed that concerns associated with the Koreans (i.e., avoiding impositions and not hurting the other's feelings) were also associated, at the individual level, with a stronger sense of the interdependent self. Similarly, a strong independent self was associated with the concern for clarity that North Americans previously demonstrated. Can we, then, generalize to an individual level the findings that collectivists prefer indirect means of conflict resolution more than individualists (Leung, 1987) or that collectivists adhere to social rules more stringently than individualists (Argyle, Henderson, Bond, Iizuka, & Contarello, 1986)? Are there within-culture differences in moral judgment similar to those found between cultures (Miller & Bersoff, 1992, this issue) that can be accounted for by self-construals? The SCS and future developments in the measurement of self in relation to other may enable knowledge gained in cross-cultural research to be applied in the study of social cognition within cultures. This could lead to the development of a "relational psychology" as envisioned by Kagitcibasi (1994).

Further studies should endeavor to disentangle the cultural aspects of individualism and collectivism from the psychological consequences of independent and interdependent self-construals. Key in this line of research will be the determination of cultural definitions of situations that guide the individual to reference the independent or the interdependent self. In other words, in what situations does culture guide the individual to independent cognitions about the self (e.g., the work setting in the United States) or to interdependent cognitions about the self (e.g., the work setting in Japan)? Another useful direction is that taken by Choi (1991), who explored the early communicative socialization patterns of mother-child pairs in Canada and Korea. Studies such as this may give us important information on the conditions that encourage the development of independent and interdependent self-construals.

In conclusion, the Self-Construal Scale is a reliable and valid measurement tool that should have many uses in future research. The results of this and future studies may help us to understand and overcome some of the cultural and individual differences contributing to conflicts that arise when diverse peoples interact.

#### NOTES

1. The emphasis on connectedness to social context that is associated with interdependence may remind many readers of descriptions of self-monitoring (Snyder, 1974, 1979). Although no empirical evidence is currently available and there may be some relationship, there are several important theoretical differences that can only be outlined here. Whereas the high self-monitor remains *separate* from social context but adapts to it for self-presentational purposes, the highly interdependent person *blends* together with the social context in his or her self-image and actions. The manipulation of self-image for personal benefit found in high self-monitors seems quite different from the

flexibility of self-in-service-to-other that characterizes interdependence. Likewise, the person with a well-developed interdependent self would not choose to be the center of attention or to be extraverted (like a high self-monitor) but would rather be unobtrusive and fit in. One might expect a positive correlation between interdependent self-construals and the Other-Directedness factor of the Self-Monitoring Scale (see Hoyle & Lennox, 1991). At the same time, it seems plausible that independent self-construal scores would be moderately correlated with the Extraversion factor of self-monitoring. The relationship of self-construals and self-monitoring deserves further investigation.

2. *Private self* will be used throughout this section to refer to Triandis's (1989) conceptualization of a set of cognitions referring to individual traits, states, and behaviors.

3. The number of subjects varies slightly across analyses due to missing data.

## REFERENCES

- Anderson, J. C., & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika*, 49, 155-173.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two step approach. *Psychological Bulletin*, 103, 411-423.
- Argyle, M., Henderson, M., Bond, M., Iizuka, Y., & Contarello, A. (1986). Cross-cultural variations in relationship rules. *International Journal of Psychology*, 21, 287-315.
- Baumeister, R. F. (1986). *Public self and private self*. New York: Springer.
- Bentler, P. M., Jackson, D. N., & Messick, S. (1971). Identification of content and style: A two-dimensional interpretation of acquiescence. *Psychological Bulletin*, 76, 186-204.
- Berry, J. W. (1979). A cultural ecology of social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12, pp. 177-207). New York: Academic Press.
- Berry, J. W., & Kim, U. (1988). Acculturation and mental health. In P. R. Dasen, J. W. Berry, & N. Sartorius (Eds.), *Health and cross-cultural psychology* (pp. 207-236). Newbury Park, CA: Sage.
- Bhawuk, D.P.S., & Brislin, R. W. (1992). The measurement of intercultural sensitivity using the concepts of individualism and collectivism. *International Journal of Intercultural Relations*, 16, 413-436.
- Bond, M. H., & Venus, C. K. (1991). Resistance to group or personal insults in an ingroup or outgroup context. *International Journal of Psychology*, 26, 83-94.
- Breckler, S. J., Greenwald, A. G., & Wiggins, E. C. (1986, June). *Public, private, and collective self-evaluation: Measurement of individual differences*. Paper presented at the International Researches and Exchanges Board (IREX) Conference on Self and Social Involvement, Princeton, NJ.
- Brislin, R. W., Cushner, K., Cherrie, C., & Yong, M. (1986). *Intercultural interactions*. Beverly Hills, CA: Sage.
- Byrne, B. M. (1989). *A primer of LISREL*. New York: Springer-Verlag.
- Chinese Culture Connection. (1987). Chinese values and the search for culture free dimensions of culture. *Journal of Cross-Cultural Psychology*, 18, 143-164.
- Choi, S. H. (1991). Communicative socialization processes: Korea and Canada. In S. Iwawaki, Y. Kashima, & K. Leung (Eds.), *Innovations in cross-cultural psychology* (pp. 103-122). Lisse: Swets & Zeitlinger.
- Cross, S. E., & Markus, H. R. (1991, August). *Cultural adaptation and the self: Self-construal, coping, and stress*. Paper presented at the annual meeting of the American Psychological Association, San Francisco.
- Geertz, C. (1975). On the nature of anthropological understanding. *American Scientist*, 63, 47-53.
- Greenwald, A. G., & Pratkanis, A. R. (1984). The self. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (Vol. 3, pp. 129-178). Hillsdale, NJ: Lawrence Erlbaum.
- Hofstede, G. (1980). *Culture's consequences*. Beverly Hills, CA: Sage.
- Hoyle, R. H., & Lennox, R. D. (1991). Latent structure of self-monitoring. *Multivariate Behavioral Research*, 26, 511-540.
- Hui, H. C. (1988). Measurement of individualism-collectivism. *Journal of Research in Personality*, 22, 17-36.
- Jöreskog, K. G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, 36, 109-133.
- Kagitcibasi, C. (1994). A critical appraisal of individualism-collectivism: Toward a new formulation. In U. Kim, H. C. Triandis, C. Kagitcibasi, & G. Yoon (Eds.), *Individualism and collectivism: Theoretical and methodological issues* (pp. 52-65). Thousand Oaks, CA: Sage.
- Kim, M. S. (1993). Culture-based interactive constraints in explaining cross-cultural strategic competence. In R. L. Wiseman & J. Koester (Eds.), *International and intercultural communication annual 17* (pp. 132-150). Newbury Park, CA: Sage.
- Kim, M. S., Sharkey, W. F., & Singelis, T. M. (1994). The relationship between individuals' self-construals and perceived importance of interactive constraints. *International Journal of Intercultural Relations*, 18, 117-140.
- Kluckhohn, R., & Strodtbeck, F. (1961). *Variations in value orientations*. Evanston, IL: Row, Peterson.
- Koestler, A. (1967). *The ghost in the machine*. New York: Macmillan.
- Kuhn, M. H., & McPartland, T. (1954). An empirical investigation of self-attitudes. *American Sociological Review*, 19, 58-76.
- Leung, K. (1987). Some determinants of reactions to procedural models for conflict resolution: A cross-national study. *Journal of Personality and Social Psychology*, 53, 898-908.
- Leung, K., & Bond, M. (1984). The impact of cultural collectivism on reward allocation. *Journal of Personality and Social Psychology*, 47, 793-804.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Marsella, A., DeVos, G., & Hsu, F.L.K. (Eds.). (1985). *Culture and self*. London: Tavistock.
- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97, 562-582.
- Miller, J. G. (1984). Culture and the development of everyday social explanation. *Journal of Personality and Social Psychology*, 46, 961-978.
- Miller, J. G., & Bersoff, D. M. (1992). Culture and moral judgment: How are conflicts between justice and interpersonal responsibilities resolved? *Journal of Personality and Social Psychology*, 62, 541-554.
- Paulhus, D. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Ray, J. J. (1983). Reviving the problem of acquiescent response bias. *Journal of Social Psychology*, 121, 81-96.
- Roland, A. (1988). *In search of self in India and Japan*. Princeton, NJ: Princeton University Press.
- Sharkey, W. F., & Singelis, T. M. (1994). *Self-construal, social anxiety, and embarrassability*. Manuscript submitted for publication.
- Shweder, R. A., & Bourne, E. J. (1984). Does the concept of person vary cross-culturally? In R. A. Shweder & R. A. LeVine (Eds.), *Culture theory: Essays on mind, self, and emotion* (pp. 158-199). Cambridge: Cambridge University Press.
- Singelis, T. M. (1993). [Interdependence and communication apprehension]. Unpublished raw data.
- Singelis, T. M. (1994). *Culture, self, and emotional contagion*. Manuscript submitted for publication.
- Singelis, T. M. (in press). Bridging the gap between culture and communication. In F. van de Vijver, P. Schmitz, & P. Boski (Eds.), *Selected papers from the 12th International Conference of the Association for Cross-Cultural Psychology*. Lisse: Swets & Zeitlinger.
- Singelis, T. M., & Brown, W. J. (in press). Culture, self, and collectivist communication: Linking culture to individual behavior. *Human Communication Research*.
- Singelis, T. M., & Sharkey, W. F. (in press). Culture, self-construal, and embarrassability. *Journal of Cross-Cultural Psychology*.
- Singelis, T. M., Triandis, H. C., Bhawuk, D. S., & Gelfand, M. (1994). *Horizontal and vertical dimensions of individualism and collectivism*. Manuscript submitted for publication.
- Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30, 526-537.

- Snyder, M. (1979). Self-monitoring processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12, pp. 85-128). New York: Academic Press.
- Trafimow, D., Triandis, H. C., & Goto, S. G. (1991). Some tests of the distinction between the private self and the collective self. *Journal of Personality and Social Psychology*, 60, 649-655.
- Triandis, H. (1988). Collectivism and individualism: A reconceptualization of a basic concept in cross-cultural psychology. In C. Bagley & G. Verma (Eds.), *Personality, cognition, and values: Cross-cultural perspectives of childhood and adolescence* (pp. 60-95). London: Macmillan.
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96, 506-520.
- Triandis, H. C. (1994). Theoretical and methodological approaches to the study of collectivism and individualism. In U. Kim, H. C. Triandis, C. Kagitcibasi, & G. Yoon (Eds.), *Individualism and collectivism: Theoretical and methodological issues* (pp. 41-51). Thousand Oaks, CA: Sage.
- Triandis, H. C., Bontempo, R., Betancourt, H., Bond, M., Leung, K., Brenes, A., Georgas, J., Hui, H. C., Marin, G., Setiadi, B., Sinha, J.B.P., Verma, J., Spangenberg, J., Touzard, H., & de Montmollin, G. (1986). The measurement of etic aspects of individualism and collectivism across cultures. *Australian Journal of Psychology*, 38, 257-267.
- Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-in-group relations. *Journal of Personality and Social Psychology*, 54, 323-338.
- Triandis, H. C., Leung, K., Villareal, M. J., & Clack, F. L. (1985). Allocentric versus idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in Personality*, 19, 395-415.
- Triandis, H. C., Marin, G., Lisansky, J., & Betancourt, H. (1984). Simpatia as a cultural script of Hispanics. *Journal of Personality and Social Psychology*, 47, 1363-1375.
- Triandis, H. C., McClusker, C., & Hui, H. C. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology*, 59, 1006-1020.
- Trott, D. M., & Jackson, D. N. (1967). An experimental analysis of acquiescence. *Journal of Experimental Research in Personality*, 2, 278-288.
- Yamaguchi, S. (1990, July). *Personality and cognitive correlates among the Japanese*. Paper presented at the First International Conference on Individualism and Collectivism: Psychocultural Perspectives from East and West, Seoul, Korea.
- Yamaguchi, S. (1994). Collectivism among the Japanese: A perspective from the self. In U. Kim, H. C. Triandis, C. Kagitcibasi, & G. Yoon (Eds.), *Individualism and collectivism: Theoretical and methodological issues* (pp. 175-188). Thousand Oaks, CA: Sage.
- Yamaguchi, S., Kuhlman, D. M., & Sugimori, S. (1992, May). *Universality of personality correlates and dimensionality of person's collectivistic tendencies*. Paper presented at the Center for Korean Studies Colloquium, University of Hawaii, Honolulu.