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VALIDATION OF ISCOL:

AN IDENTITY SPECIFIC MEASURE OF COLLECTIVISM

by

ANNE REID

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1998

Approval Page

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Sept. 8, 1998
Date

Chair of Examining Committee

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Abstract

VALIDATION OF ISCOL:
AN IDENTITY SPECIFIC MEASURE OF COLLECTIVISM

by

Anne Reid

Advisor: Professor Kay Deaux

Collectivism has been measured as a dimension of cultural variation (Hofstede, 1980; Triandis et al., 1986), as an individual difference (Triandis, 1995), and as a characteristic of interpersonal relationships (e.g., Allik and Realo, 1996; Hui, 1988). Reid, Deaux, Mizrahi, and Poulson (1996) have developed a measure of collectivism that shifts the focus to groups and group memberships. Identity Specific Collectivism (ISCol) is offered as a unique way of measuring collectivism, one that grows out of a distinctly social psychological framework, building on theory and research about the self and social identity as well as theory and research on collectivism. This group-level approach suggests that people have different amounts of collectivism toward their different group memberships.

Three studies designed to test the psychometric integrity of ISCol are described. ISCol is shown to have very good internal consistency and test-retest reliability. Convergent and divergent validity are explored by examining the relationship between ISCol and an existing measure of collectivism (Triandis, 1995). Correlations, exploratory, and confirmatory factor analysis provide evidence of divergent validity, each suggesting that ISCol and Triandis' (1995) represent distinct, yet related constructs.

Construct validity was also demonstrated by showing that ISCol varies meaningfully at the

level of the group. In Study 1, collectivism toward a particular ethnic or nationality group predicted future collectivism toward that same group better than it predicted collectivism toward memberships based on occupations or hobbies. In study 2, groups are shown to differ in collectivism in a way that relates to other group characteristics such as group pride. Study results were similar to those found by Deaux et al. (1995), suggesting some overlap between insiders and outsiders' perceptions of group collectivism. In both, religious groups are high in collectivism while occupation and hobby groups are low.

While concurrent validity is demonstrated, evidence of predictive validity is limited. Group specific collectivism did not predict members' agreement with ingroup and outgroup norms. The meaning and applicability of identity specific collectivism is explored in light of results from these three studies. Further studies are needed to complete the validation of ISCol.

Acknowledgments

I would like to thank the members of my dissertation committee, Professors Kay Deaux, Vita Rabinowitz, David Rindskopf, Tracey Revenson, and Howard Ehrlichman, for their helpful insights and an enjoyable defense. Special thanks to Kay Deaux, my mentor throughout my graduate career, who taught me how to conduct thoughtful and meaningful research. Members of the Identity Research Seminar and of the Graduate Center Community in general have been an invaluable resource, providing both assistance and necessary distractions over the years. Finally, I thank my parents and Kim Mizrahi for all of their much needed support.

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The distinction between separation from others and connection to others is central to many current conceptualizations of self (Hinkle & Brown, 1990; Markus & Kitayama, 1991; Triandis, 1994; Williams, 1984). Various labels are used to describe this distinction including independent versus interdependent construal of self (Markus & Kitayama, 1991), idiocentrism-allocentrism (Triandis, Leung, Villareal, & Clack, 1985), individual and group loyalties and cultures of relatedness and separateness (Kagitcibasi & Berry, 1989). The most widely used designation remains individualism-collectivism (Hofstede, 1980; Triandis, 1994).

Collectivism is conceptualized as a constellation of beliefs, feelings and values regarding the positioning of the self in relation to other members of a common group membership. Hui and Triandis (1986) identify a sense of common fate with ingroup members, an emphasis on the sharing of material and non-material resources, susceptibility to the social influence of ingroup members, greater concern for self-presentation than self-expression, a sense of shared outcomes, and a desire to maintain harmony and avoid animosity among ingroup members as primary components of collectivism.

In Oyserman's (1993) characterization, collectivists strive to maintain social norms, share beliefs and attitudes with their ingroup, stress cooperation with ingroup members, take the ingroup as the basic unit of survival, and draw few distinctions between the self and the ingroup. Other researchers conceptualize collectivism in a similar fashion (e.g., Brown, Hinkle, Ely, Fox-Cardamone, Maras, & Taylor, 1992; Kagitcibasi & Berry, 1989; Markus & Kitayama, 1990; Schwartz, 1990).

Collectivism has traditionally been characterized and studied on three levels; as a characteristic of the culture; as a characteristic of the individual; and more recently as a characteristic of specific types of relationships. In the pages that follow, I will describe each of these approaches. I will then introduce a new approach to the study of collectivism, one that considers collectivism at the level of the social group. I will explore the ways in which this construct can be defined and measured by describing a new instrument designed to capture variations in collectivism at this level. Finally, I will describe a series of three studies that test the psychometric integrity of this new measure and, by extension, the utility of this new approach to collectivism.

Collectivism as a Characteristic of the Culture

The origins of collectivism as we know it today can be traced back to Hofstede (1980). In his seminal work, Hofstede (1980) administered a measure of work related values to the employees of a large corporation with offices in 40 different countries. Factor analysis of responses identified four dimensions of cultural variation, including individualism. Hofstede rank ordered the 40 countries in terms of their level of individualism. The U.S. ranked highest in individualism followed by Australia, Great Britain, and Canada. Venezuela, Columbia, and Pakistan ranked lowest in individualism (highest in collectivism) on Hofstede's list. The validity of this rank ordering was demonstrated with significant correlations between it and several country-level indicators, including GNP per capita, occupational mobility, and freedom of the press.

Since Hofstede (1980), theory and research on collectivism have become far more complex. Collectivism is no longer applied solely to the work domain. The construct

has been expanded to encompass a variety of social domains and contexts, most notably and frequently those having to do with family and friendship groups. Nor is collectivism conceptualized solely as a set of values. Contemporary scales assess respondents' agreement or lack of agreement with attitude-based items such as "If the group is slowing me down it is better to leave it and work alone" (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), "I would share my ideas or newly acquired knowledge with my parents" (Hui, 1988), "Advancement and development in life are dependent on self-initiative" (Oyserman, 1993), and "The needs of people close to me should take priority over my personal needs" (Earley, 1994). Although the item pool among the attitude measures is quite varied, most of these scales appear to tap similar phenomena.

Collectivism's utility in differentiating between cultures continues to capture the attention of the psychological community. Further attempts have been made to replicate Hofstede's (1980) rank ordering of countries with measures of collectivism designed for use outside the work domain (Morling et al., 1993; Triandis et al., 1986). Though the results of these efforts are anything but consistent (Reid, 1996), they demonstrate a continued interest in the ability to classify and differentiate between cultures on the basis of collectivism.

Collectivism has been used to explain cultural differences in cognition, affect, and behavior. Much of this work has focused on how people with different cultural backgrounds relate to ingroup and outgroup members. In comparison to members of individualistic cultures, members of collective cultures respect ingroup members more than outgroup members (Mann, Mitsui, Beswick, and Harmoni, 1994), perform better in

groups and under group-focused training (Earley, 1989; Earley, 1994; Yamagishi, 1988), are more likely to respect ingroup status hierarchies and to draw clear distinctions between ingroup and outgroup members (Bond, Wan, Leung, and Giacalone, 1985; Triandis, Brislin, and Hui, 1988) and are more likely to distribute rewards evenly among ingroup members regardless of individual contribution to common tasks (Hui, Triandis, and Yee, 1991; Leung & Bond, 1982; 1984; Leung & Iwawaki, 1988).

Cultural differences in collectivism have also been related to the experience of ego-focused versus other-focused emotions (Gudykunst & Ting-Toomey, 1988; Markus & Kitayama, 1991), self-focused versus other-focused needs (Hui & Villareal, 1989), humor (Alden, Hayer, & Lee, 1993), attributional style (Al-Zahrani & Kaplowitz, 1993; Kashima, Seigal, Tenaka, and Kashima, 1992), conflict resolution (Leung, 1987; Leung, 1988; Leung, Au, Fernandez-Dols, and Iwawaki, 1992), and cognitive processes and structures (Karjala, 1993; Trafimow, Triandis, & Goto, 1991; Triandis, McCusker, & Hui, 1990; Van Den Heuvel, Tellegen, & Koomen, 1992).

The problem with culturally-based approaches to collectivism is twofold. First, they use individually based methods of assessment to measure what is supposed to be a cultural construct. Theoretical discussions of the meaning of collectivism at the cultural level focus on structural components of the society. For example, Hui, Triandis, and Yee (1991) describe collectivism as a dimension for classifying world cultures and collective cultures as ones in which "the prevalent norms are interdependence within clans and/or extended families, 'We' consciousness, and socially based identity" (p. 147, emphasis added). Matsumoto, Kudoh and Takeuchi (1996, pp. 77-78) define cultural collectivism

as "the degree to which a culture encourages, fosters and facilitates the needs, wishes, desires and values of individuals over groups". Similarly, Wheeler, Reis and Bond (1989) describe the extreme of collectivism as "when one group completely determines all aspects of one's life. One must conform to the norms of this group because there is nowhere else to go" (p. 80). These same authors, and many more with a similar theoretical outlook, measure cultural collectivism with individually administered pencil and paper questionnaires. These questionnaires measure the extent to which individuals perceive themselves to place their own needs over the needs of the group not, as the definitions above would suggest, the extent to which the culture fosters or demands such behavior.

Deaux and Reid (in press) point out the importance of maintaining balanced levels of analysis when studying collectivism. If collectivism is, as it is theorized to be, a characteristic of the culture, it does not make sense to measure it as if it were a characteristic of an individual, i.e., through individual questionnaire completion. The responses from a handful of members of any given country to a questionnaire may be indicative of and even be used as an easy and inexpensive proxy for cultural collectivism, but cannot be allowed to represent fully collectivism at the cultural level.

A more appropriate strategy for measuring a culture's collectivism might start with methods developed to measure social representations. From this approach, the culture itself, not its individual members, is taken as the unit of analysis. For example, data might be gleaned from cultural artifacts such as official public policy, folklore, popular arts, traditions and sayings. The attitudes and values of individual members are

one important aspect of the culture, but not the sole definition.

The second problem with traditional approaches to the measurement of cultural collectivism is the assumption that culture's impact is constant, affecting all of its members in the same way. These approaches ignore the fact that within culture variations in collectivism can be as great as if not greater than variations found between cultures (Matsumoto, Kudoh &Takeuchi, 1996). It is possible to find highly individualistic personalities within highly collective cultures and vice versa (Alik & Realo, 1996). Measurement approaches that assess a handful of individuals within a culture and then average over their responses to obtain an estimate of the culture's collectivism miss important variation.

Collectivism as a Characteristic of the Individual

Collectivism has also been conceptualized as a personality or individual difference variable. In this approach, people within a particular culture are located on the individualism-collectivism dimension (e.g., Hui, 1988; Triandis, Leung, Villareal, & Clack, 1985). Collectivism assessed at the level of the individual has been used to explain differences in people's reliance on stereotypes and display of bias (Dion, Pak, & Dion, 1990), use of the equity and equality rules of reward allocation and perceptions of and satisfaction with the amount and quality of social support received (Triandis, Leung, Villareal, & Clack, 1985).

Although far less research exists on collectivism as a personality characteristic than on collectivism as cultural variable, there is general agreement that collectivism can and does vary among individuals within cultures (Hui, 1988; Kagitcibasi & Berry, 1989;

Triandis et al., 1993). This approach fares well in terms of maintaining balance in levels of analysis. Collectivism is defined as a characteristic of the individual; is measured individually through attitudinally based pencil and paper questionnaires; and is theoretically and empirically linked to individual level outcomes.

The problem with this approach is that it fails to take into account the role of the social context in determining collective attitudes and behaviors. It reduces collectivism to a trait-like quality, one that is a static and unchanging characteristic of the person. The classification of individuals as either individualists or collectivists barely skims the conceptually rich surface of collectivism (Matsumoto, Kudoh & Takeuchi, 1996). As an alternative, one might characterize collectivism as a social orientation that responds to shifts in the social context. As an orientation, levels of collectivism would be responsive to changes in the social environment. One such approach suggests that an individual's level of collectivism varies as a function of the social relationship under consideration.

Collectivism as a Characteristic of Social Relationships

Several researchers have begun to define and measure collectivism as an orientation toward a particular social relationship. Hui's (1988) INDCOL scale is one of the first measures of collectivism that is targeted toward social relationships. This scale is designed to measure collectivism toward each of several targets: parents, spouse, siblings, other family members (e.g., aunt), friends, coworkers, neighbors, acquaintances, and strangers. (See Appendix A for sample items from each target subscale.) Responses can be summed over the entire scale for a general index of collectivism or calculated separately for each of the targets. Using this latter, target-sensitive approach, Hui and

Triandis (1986) find an inverse relationship between social distance and collectivism such that collective concern increases as the social distance between self and target decreases. Collective concern is highest for spouse and mother (low social distance) and lowest for stranger and foreigner (high social distance), with siblings, friends, other relatives, co-workers, neighbors, and acquaintances, in that order, filling out the middle.

Matsumoto, Kudoh and Takeuchi (1996) propose a similar measure, the Individualism-Collectivism Assessment Inventory (ICAI). The ICAI measures collective beliefs and feelings in the context of four social relationships: family, close friends, colleagues and strangers. These authors have demonstrated that cultural differences in collectivism depend upon the social relationship in the context of which collectivism is measured. For example, U.S. university students, especially those with ethnic backgrounds other than European, were more collective in relation to their family than Japanese university students but equally collective in relation to their friends and colleagues.

Allik and Realo (1996) also suggest that collectivism should not be defined as a single uniform construct but rather as a superordinate construct with many different components. These authors propose their own measures, ESTCOL, designed to tap into three such components, family collectivism, peer collectivism and society-related collectivism. Other authors have proposed similar measures (e.g., Singelis, 1994) to assess collectivism in the context of specific social relationships.

These instruments mark a significant step forward in the measurement of collectivism. They mark a shift toward a more complex picture of collectivism, one that

starts to take the social context into account. Unfortunately, theoretically driven empirical tests of this new conceptualization are hard to find. Researchers have been content to demonstrate relationship-based differences in levels of collectivism (Allik and Realo, 1996; Hui and Triandis, 1986; Matsumoto, Kudoh and Takeuchi, 1996) without asking more difficult questions regarding the utility of such distinctions. For example, one might predict that collectivism towards one's family predicts behavior toward one's family, such as willingness to make sacrifices for, spend time with or obey them. In order to determine whether relationship-based distinctions in collectivism are valid and worthwhile, predictions such as these should be tested.

In addition, I suggest that relationship-based measures are far too limited in scope. These pioneers take the important first step of asking whether collectivism varies within individuals, i.e., as a function of different relationship types. Unfortunately, they fail to take into account the myriad of social groups other than those based on (primarily dyadic) interpersonal relationships that a person might belong to.

Using a combination of card sorting tasks, survey methods and multidimensional scaling techniques, Deaux, Reid, Mizrahi, and Ethier (1995) have identified four additional categories of social identification that are not addressed by relationship-based approaches and measures: vocations and avocations such as student and athlete; political affiliation, such as Democrat or Feminist; ethnicity and religion, such as African-American and Jewish; and stigmatized identities, such as handicapped and alcoholic. These social groups have been totally ignored by researchers interested in target-based variations in collectivism, a fact that is even more interesting given the primary role of

the ingroup in most definitions of collectivism.

Not only is an exclusive focus on one type of social group intellectually limiting, some researchers suggest that identities based on interpersonal relationships are different in many meaningful ways from identities based on membership in a larger collective or social category (Brewer and Gardner, 1996; Triandis, 1989). For one, interpersonal identities are based on personal bonds of intimacy. In this case, the identity, e.g., mother, is defined in reference to the one who is being mothered, e.g., the child. Collective identities, on the other hand, are based on more cognitive and less personal connections; i.e., identification with a common group membership. In this case, the identity, e.g., African-American, is defined in reference to the other people who also claim that identity, e.g., other African-Americans.

Brewer and Gardner (1996) demonstrate that identities based on collective memberships can be primed independently of identities based on interpersonal relationships, suggesting that the two are stored independently in cognition. All of the existing measures of collectivism sensitive to relationship type define the groups in terms of the interpersonal relationship rather than as collective memberships and social groups. This may cause them to miss important variability in collectivism.

Also noteworthy is the fact that relationship type is operationalized on a fairly large scale. For example, a relationship type used in every one of the relationship-based approaches is "family". Finer distinctions within the family group are not only possible but potentially meaningful. For example, some may be extremely collective toward their nuclear family but not their extended family, or to their sisters but not their brothers, or to

their father but not their mother. Use of the gross category "family" glosses over such potentially important and useful finer distinctions.

Finally, relationship type is confounded with social distance. Though it is interesting that people are more collective toward those relationship groups that they are closest to, such as family and friends, and least collective toward those groups that are more socially remote, such as strangers and colleagues, the conflation of these constructs makes it difficult to determine whether the type of social relationship or merely the social closeness of the targeted group is responsible for variations in collectivism. In response to these concerns, we have developed a fourth approach to the study of collectivism, one that places the social group at the focus of inquiry.

Collectivism as a Characteristic of the Social Group

Kagitcibasi and Berry (1989) suggest that in socially complex societies in which individuals belong to a variety of social groups it may not be enough simply to characterize the culture or individuals within that culture as being either individualistic or collective. I agree and recommend a new approach, one that examines collectivism as a group-related construct. This approach grows out of a larger movement within social psychology; one that recognizes the central importance of the group and group membership (Deaux, 1993; 1996; Markus & Kitayama, 1994; Silver & Brewer, 1997). This approach takes the social group as an important focus of scientific inquiry and suggests that individuals can and do have different orientations toward and ways of interacting within the context of each of their multiple group memberships.

Deaux, Reid, Mizrahi and Cotting's (in press) study of motives for group

identification provides an illustrative example of how social psychology can benefit from a group-level perspective. Specifically, they demonstrated that different group memberships serve different functions for their members. Members of five different social groups (Mormons, lacrosse team members, health club members, Taiwanese-Americans, and college students) rated their group membership on the extent to which it satisfied various psychological needs. Social group membership differences were found, suggesting that different groups served different functions for their members. For example, lacrosse team members reported more opportunity for intergroup comparison and competition as a result of their group membership than did Mormons. Mormons, on the other hand, were more likely to say that they gained self-understanding and insight from their membership than were lacrosse team members.

Similarly, Silver and Brewer (1997) had respondents complete a measure of group identification and a measure of group loyalty for each of their five most important group memberships plus two common group memberships, "American" and "Ohio State University Student". Both group loyalty and group identification were correlated with group importance. Furthermore, being loyal to one group did not necessarily conflict or interfere with being loyal to some other group. In other words, people can be loyal to more than one group membership.

From this perspective, at least we must recognize the possibility that individuals' collectivism depends not only on the interpersonal context but also on the social group context. For example, consider a person who is a triathlete and a fraternity member. He might be highly collective with regard to his fraternity, displaying great loyalty to other

fraternity members and adherence to house norms and status hierarchies. As a triathlete, on the other hand, he might be very low in collectivism, not caring so much about the needs or attitudes of other triathletes and, in fact, actively competing against his other group members for a common goal.

Deaux, Reid, Mizrahi, and Ethier (1995) demonstrated that people use collectivism to meaningfully distinguish among different types of social groups. Respondents were asked to rate the similarity of 64 social groups and categories. Subsequent cluster analysis and multidimensional scaling indicated that political groups, ethnic groups and religious groups were perceived as more collective than vocation and avocation groups. Though this study clearly indicates that collectivism is perceived to vary as a function of target group, the conclusions that can be drawn from it are limited because outsiders' perceptions of collectivism rather than ingroup members' actual level of collectivism were measured.

Collectivism toward specific group memberships is a potentially useful construct in many ways. Foremost among its strengths is that it opens up a whole new level of analysis, one that has the potential of answering questions that cannot be addressed by previous approaches. For example, the fact that cultures differ in terms of collectivism does not explain why at any given time in a country's history some groups within that culture are socially active while other, equally oppressed, groups are not (Deaux & Reid, in press). Similarly, the fact that individuals within cultures differ in terms of collectivism does not explain how any one individual can act differently toward her different group memberships. For example, an African-American feminist might not be

equally active or involved in both the civil rights movement and the feminist movement. Cultural and individual collectivism are too broad to explain why she might focus on one movement and pay less attention to the other. Relationship type approaches are useless as well, as they focus on collectivism toward targets that are at worst irrelevant and at best equally relevant to both of the group identifications.

Some researchers have already started to explore group-based collectivism. For example, Hinkle and Brown (1990; Brown, Hinkle, Ely, Fox-Cardamone, Maras, and Taylor, 1992) propose a taxonomy in which groups are meaningfully distinguished on the basis of two dimensions, one of which is individualism-collectivism. Their model suggests that the intergroup processes outlined in Tajfel's (1978) Social Identity Theory hold only for those groups that are, among other things, highly collective and that the relationship between identification and intergroup bias should occur only among collective groups.

Brown et al. (1992) conducted a series of studies to test this model. In each study, respondents completed a battery of questionnaires, including measures of collectivism, group identification, and intergroup bias. Collectivism was measured with Triandis, Bontempo, Villareal, Asia, and Lucca's (1988) idiocentrism-allocentrism scale. This scale measures collectivism as a generalized personality characteristic with items such as "I work best on my own" and "When my group does well I feel good". As predicted, the proposed relationship between identification and intergroup bias was strongest and most consistent among collective individuals. Among those with individualistic orientations, the relationship between group identification and intergroup bias was weak.

How to interpret these findings is unclear. The authors theorize that some groups are more collective than others and that members of more collective groups are more likely to engage in outgroup bias. Thus, the interpretation the authors would like to make is that a group's level of collectivism predicts intergroup behaviors such as intergroup bias and perceptions of outgroup homogeneity. Unfortunately, the authors' use of a personality-based measure of collectivism precludes this conclusion. The fact that the measure is personality-based restricts conclusions to those involving personality; that individuals with collective personalities are more likely to display the identification / intergroup bias relationship regardless of which of their group memberships is targeted.

In order to examine the group specific nature of collectivism it is necessary to have a measure that is sensitive to group variations. A social psychological measure of collectivism should be sensitive to group-based variations and be able to distinguish between groups toward which people are high versus low in collectivism. None of the measures described thus far are designed to make such a distinction. I now introduce a new measure of collectivism, one specifically designed to address these issues.

Identity Specific Collectivism: ISCol

Reid, Deaux, Mizrahi, and Poulson (1996) have developed a measure of collectivism that shifts the focus from cultural structures and personality characteristics to groups and group memberships. Identity Specific Collectivism (ISCol) is offered as a unique way of measuring collectivism, one that grows out of a distinctly social psychological framework and builds on theory and research about the self and social identity as well as theory and research on collectivism itself.

ISCol offers several advantages over existing measures of collectivism. First, ISCol is uniquely suited to group level analysis. It fills the gap left by other measures of collectivism that focus exclusively on personality or cultural differences. Second, unlike relationship-based measures of collectivism, ISCol can be used to study collectivism with regard to any social group or category of interest to researchers, from artificial groups created in the laboratory to real social groups and categories to which respondents belong, such as woman or African-American. In defining targets, ISCol enables the researcher to go beyond simple social distance and examine how intra- and inter-group behaviors are affected by members' level of collectivism toward a particular group or groups. Finally, ISCol offers an unique set of factors for defining the meaning of collectivism. These factors are the first step in defining the structure and meaning of collectivism at the group level.

In order to create a group-sensitive measure of collectivism, items were developed to apply equally well to a variety of social groups. The items are presented as incomplete sentences (e.g., "I feel strong ties to other ___s" and "I try to make myself available to help other ___s") that are completed by inserting the name of a group to which the respondent belongs (see Appendix B).

Reid et al. (1996) had respondents complete ISCol in reference to a variety of social groups and categories. Exploratory factor analysis suggests that it is appropriate to divide ISCol into six subscales. The Emotional Attachment factor describes a need for emotional connection to the group. The Social Identity factor represents the collective tendency to see the group as an integral part of the self and to share a sense of pride in

group membership. Behavioral involvement is satisfaction with being physically close to and involved with other ingroup members. The Norms & Standards factor illustrates the collective tendency to look to the group for information about what to think and how to behave. Common Fate depicts the collective perspective that what is in the best interest of the group is also in the best interest of its individual members. Members high in common fate not only strive to meet the goals of the group but feel good when other members succeed. Comfort with the Collective describes a preference for working with other group members toward a common goal rather than working alone.

A new psychological measure must undergo a series of tests to determine whether it is adequate for psychological inquiry. At the most basic and general level, one must demonstrate that the scale measures with some degree of consistency and accuracy the theoretical construct it was designed to assess. In other words, it must be validated (Carmines & Zeller, 1981). The following studies represent the first attempt to systematically validate ISCol.

Overview of Studies

Scale validation is a process, with several important objectives. Among these is the demonstration of the scale's reliability. For a scale to be deemed reliable, it must consistently yield the same or similar results over a series of measurement trials. In study 1, respondents completed ISCol at two different points in time. Correlations between responses to ISCol at two different points in time will be used to estimate test-retest reliability.

The second critical objective of this process is the demonstration of construct and

predictive validity. Construct validity concerns the relationship between the instrument and the theoretical construct that it measures. Once a scale's reliability has been established, that is, once we know that the scales measures something consistently, we must also demonstrate empirically that the scale (a) accurately measures what it is designed to measure and (b) does not measure theoretically related but distinct constructs.

In the current case, we have set out to measure social group collectivism. Breaking this apart, it is necessary to demonstrate two things. First, it is necessary to demonstrate that ISCol measures collectivism. Second, it is necessary to demonstrate that ISCol measures a specific type of collectivism, one that is group dependent, i.e., that varies as a function of the group under consideration.. Third, it is necessary to demonstrate that ISCol captures something other than individual differences in collectivism.

Predictive validity concerns whether the scale predicts theoretically derived outcomes. My final goal is to demonstrate that ISCol predicts outcomes that are theoretically linked to group specific collectivism. The three studies that I will describe shortly use multiple methods and approaches to assess the extent to which ISCol accomplishes these goals.

In study 1, respondents complete both ISCol and an existing, personality-based measure of collectivism described by Triandis (1995). Triandis' scale is the culmination of many years of research and is taken to be an established measure of collectivism as a personality characteristic. If, as hypothesized, ISCol measures a type of collectivism that is different than personality-based collectivism, it should be related but not identical to

Triandis' (1995) measure of collectivism. Correlational, exploratory and confirmatory factor analytic techniques are used to test this prediction.

Study 1 also address validity issues concerning the group sensitivity of collectivism, that is, whether responses to ISCol depend on the group under consideration. Of the respondents who completed ISCol twice, some completed ISCol in reference to the same group both times while others completed it in reference to different groups. Respondents also completed measures of other attitudes toward specific group memberships. Again, the target groups were sometimes the same as those about which ISCol was completed and sometimes different. If ISCol is group sensitive, the association between ISCol and measures filled out in reference to the same group membership should be significantly stronger than the association between ISCol and measures filled out in reference to different group memberships.

In study 2, I assess the extent to which groups differ in collectivism. Respondents completed ISCol in reference to a variety of social groups. Multivariate analyses are used to map out differences and similarities in how collectivism is experienced by members of the various groups. Finally, in study 3, issues of predictive validity are addressed. In this study, I determine ISCol's ability to predict susceptibility to group-relevant persuasive communications delivered by either an ingroup member or an outgroup member. It is predicted that group members are most persuadable when they are high in collectivism and when the persuasive communication is delivered by an ingroup member.

Study 1: Reliability and Convergent Validity

Study 1 was designed to test three predictions. First, ISCol is hypothesized to

measure a different aspect of collectivism than that measured by existing instruments. To test this, respondents completed both ISCol and a measure designed to assess individual differences in collectivism among U.S. respondents (Triandis, 1995; see Appendix C). Exploratory and confirmatory factor analysis are used to test the prediction that ISCol taps a type of collectivism that is at least somewhat independent of the general personality characteristic. In exploratory analyses, items from each measure are predicted to load on separate factors. Confirmatory factor analysis is then used to statistically compare the independent factor model in which each measure's subscales are assumed to measure different constructs to a model in which each measure subscales are assumed to measure the same construct.

Second, ISCol's sensitivity to group level variations will be established. As described above, respondents completed ISCol twice. Some respondents completed ISCol in reference to the same group on both occasions. Other respondents completed ISCol in reference to a different group on each occasion. If ISCol is sensitive to group-based differences in collectivism, the correlation between ISCol at Time 1 and Time 2 should be significantly lower when two different groups are considered than when the same group is considered both times. If collectivism does not vary as a function of group membership or ISCol does not pick up on these variations, we would expect the correlation between ISCol at Time 1 and ISCol at Time 2 to be the same, regardless of whether the same group or different groups were considered each time. Significance tests of the difference between planned sets of correlations are used to test this prediction.

As a further test of the extent to which collectivism is group sensitive, the

relationship between ISCol and three other group-level measures is explored. If ISCol is group-sensitive, it should be able to predict other attitudes and orientations toward the same group in reference to which it was completed, but should not necessarily be able to predict the same attitudes and orientations toward a different group. If collectivism toward one group cannot predict other attitudes and behaviors toward the same group any better than it predicts attitudes and behaviors toward some other group, then not only is ISCol's utility as a measure of group-level collectivism greatly undermined, but its contribution to the literature above and beyond that of existing measures becomes questionable.

Collectivism has been shown to correlate positively with the tendency to evaluate one's ingroup positively (Hinkle & Brown, 1990), to see the self as similar to other ingroup members (Markus & Kitayama, 1992) and to pay attention to the views of other ingroup members when making decisions (Triandis et al., 1988). Respondents completed measures of evaluation, similarity, and attention at the first session. Some respondents completed these measures in reference to the same group as they did ISCol. Other respondents completed the three measures with reference to a different group membership. ISCol is predicted to correlate more strongly with the other group level measures when all scales are completed in reference to the same group than when they are completed in reference to different groups.

Method

Participants

Three hundred and four participants were drawn from two primary sources. First,

members of various intermediate-level psychology classes at several large public colleges in New York City participated for extra course credit. Second, volunteers from introductory psychology subject pools at the same institutions participated for partial fulfillment of course requirements.

Respondents' ranged in age from 16 to 60, with a mean age of 24. Sixty-six percent of the sample are women and 33% men. Thirty-nine percent of the sample is white, 20% Hispanic/Latino, 12% African-American, and 7% each of Asian-American and West Indian. Fourteen percent indicated that they were of some other ethnic background. Sixty percent of the sample was born in the United States and 61% claimed English as their first language.

Measures

Triandis' (1995) measure of collectivism. Triandis (1995) measures collectivism as a personality characteristic. The measure consists of four subscales, two representing collectivism and two representing individualism (see Appendix C). Agreement is indicated on a 9-point scale (strongly disagree to strongly agree), with high scores corresponding to high collectivism. Items are distributed into four subscales which cross individualism-collectivism with a dimension that he terms horizontal-vertical to measure four personality types. Vertical individualists are competitors who actively seek distinction and superiority over the group. Horizontal individualists consider themselves to be unique and self-reliant, but do not need actively distinguish themselves from the group in order to prove it. Vertical collectivists are extremely invested in the hierarchical structure of the group, even if they fall on the subordinate end of that hierarchy.

Horizontal collectivists are well integrated in their group, but do not define their membership in terms of hierarchical relations. The measure has adequate reliability with subscale alphas ranging from .67 to .77 (see Table 1). Triandis (1995) considers this scale his best measure of individual differences in collectivism and individualism in the United States at this point in time.

ISCol. ISCol is used to assess group-specific collectivism (see Appendix B). ISCol consists of 36 incomplete statements each of which describes an attitude or orientation toward group membership such as "Being a __ is central to who I am". To complete the measure, respondents first select one of their group memberships from a list of social groups and categories provided by the researcher. For example, one respondent might elect to complete ISCol in reference to their membership in the religious group "Catholic". They are then instructed to fill in the blanks with the group they selected in order to complete each statement. So, the item "Being a __ is central to who I am" would read "Being a Catholic is central to who I am". Agreement with items is assessed on a 7 point scale, where 1=disagree strongly and 7=agree strongly. High scores correspond to high collectivism. Overall scale reliability is excellent (Cronbach's $\underline{a}$ =.92) with subscales demonstrating moderate ($\underline{a}$ =.69) to high ($\underline{a}$ =.86) levels of internal consistency (see Table 1).

Evaluation. The group evaluation measure (Brown et al., 1992; see Appendix D) asks respondents to rate their group on several dimensions (e.g., good-bad, strong-weak). Responses are given on a five point scale, e.g., 1 = competent to 5 = incompetent. Responses are reverse scored and then averaged such that high mean scores correspond to

positive evaluations of the group. Scale reliability is excellent, a = .92 (see Table 1).

Similarity. The similarity scale (see Appendix E) was developed by the author for the purpose of this study. The scale measure the extent to which respondents see themselves as similar to ingroup members on several group relevant dimensions. For example, respondents estimate how similar their opinions about what it means to be a "good" group member are to the opinions of other ingroup members. Responses are given on a five point scale where 1 = totally dissimilar and 5 = totally similar. High scores correspond to high perceived similarity. Scale reliability is good, a = .79.

Attention. The attention scale (see Appendix F) was developed by the author for the purpose of this study. The measures the extent to which respondents rely upon other ingroup members to make important decisions. For example, respondents indicate the extent to which they pay attention to the views of other ingroup members when deciding who to vote for. what kind of work to do and what kind of education to pursue. Responses are given on a five point scale where 0 = I never pay attention and 4 = I always pay attention. People who score high on this measure pay a lot of attention to the opinions of other group members when making personal decisions. Scale reliability is very good, a = .87.

Procedure

This study took place in two sessions, separated by 2 weeks in time. In the first session, respondents completed a battery of six questionnaires including (a) Triandis' (1995) measure of collectivism, (b) ISCol, (c) group-specific measures of evaluation, similarity and attention and (d) a short demographics questionnaire. Triandis' (1995)

measure of collectivism was always presented first so that responses would not be influenced by any unintentional priming that might result from exposure to group specific measures. ISCol was always presented next, due to the central role it plays in the study. The three other group-level measures were presented next and were randomly ordered for each respondent. Finally, respondents completed the demographics questionnaire.

Participants were randomly assigned to experimental conditions at Time 1. All respondents completed ISCol in reference to an ethnic, religious, or nationality group (see Appendix G for the list of these groups). Respondents in the *same group Time 1* condition completed the three other group level measures (evaluation, similarity, and attention) in reference to the same ethnic, religious, or nationality group. Respondents in the *different group Time 1* condition completed the three other group level measures in reference to a different group, this one based on respondents' occupation (e.g., student, salesperson) or vocation (e.g., athlete, musician). Respondents in the *different group Time 1* condition received detailed instructions about switching reference groups after completing ISCol in order to reduce any confusion caused by a change of target group half way through the experiment. Respondents in the *same group Time 1* condition received the same instructions for the other three group level measures, only without the discussion of switching target groups.

In session 2, respondents completed ISCol a second time. Again, participants were randomly assigned to one of two conditions. Half of the respondents were assigned to the *same group Time 2* condition. These respondents complete ISCol in reference to the same ethnic, religious, or nationality group as in the first session. The other half of

respondents were assigned to the *different group Time 2* condition. These respondents completed ISCol in reference to one of their occupational or vocational group memberships. Finally, respondents were provided with an explanation of the study including references to relevant literature and an invitation to ask questions or express concerns about their experience.

Results

A total of 281 respondents completed the entire Time 1 questionnaire packet, including Triandis' measure of collectivism, ISCol, and three other measures of group specific orientation. Respondents completed ISCol at Time 1 in reference to an ethnic, religious or nationality identity. The most frequently chosen of these groups were Hispanic (n = 48), American (n = 38), Jewish (n = 34), African-American (n = 32) and New Yorker (n = 29). Other popular group memberships included Christian, Catholic, Chinese, Italian and Jamaican.

Approximately equal numbers of respondents completed the *same group Time 1* packet (n = 134) as completed the *different group Time 1* packet (n = 147). Respondents in the *same group Time 1* condition completed the evaluation, similarity and attention scales in reference to the same ethnic, religious or nationality group membership about which they completed ISCol. Respondents in *the different group Time 1* condition completed these measures in reference to one of their occupation or vocation group memberships. Among respondents in the *different group Time 1* condition the most frequently chosen occupations and avocations were student (n = 58), psychology major (n = 21), artist (n = 8), athlete (n = 8) and musician (n = 7). Other groups mentioned several

times include office worker, volunteer and basketball player.

One hundred and twenty seven respondents (45%) returned two weeks after completing the baseline questionnaire packet to complete ISCol a second time. Approximately equal numbers of these respondents were assigned to the *same group Time 2* condition (n = 61) and the *different group Time 2* condition (n = 66).

Respondents in the *same group Time 2* condition completed ISCol the second time in reference to the same Ethnic, Religious, or Nationality group as they did the first time. Respondents in the *different group Time 2* condition completed ISCol at Time 2 in reference to a group membnership other than the Ethnic, Religious, or Nationality group they used at Time 1. The occupation and vocation groups in reference to which ISCol was most frequently completed at Time 2 were student, psychology major, artist, athlete and musician.

Discriminant Validity

The relationship between ISCol and Triandis' (1995) personality-based measure of collectivism was evaluated with Time 1 data from all respondents. ISCol is hypothesized to tap an aspect of collectivism (namely group sensitive collectivism) that is different than the personality characteristic. Three approaches were used to test this hypothesis. In the first approach, the bivariate correlations between ISCol and Triandis subscales were compared. The correlations between the six ISCol subscales and each of the four Triandis subscales were predicted to be significant but low, indicating association and independence at the same time. In the other two approaches, exploratory and confirmatory factor analytic procedures are used to estimate the relationship between

ISCol and personality-based collectivism. In both cases, the six ISCol subscales and four Triandis subscales are predicted to load on separate factors.

Bivariate correlations. ISCol correlates significantly and in the expected direction with horizontal collectivism, $r(277) = .15$, $p = .01$, vertical collectivism, $r(277) = .18$, $p = .003$, and horizontal individualism, $r(277) = -.14$, $p = .02$, and vertical individualism, $r(277) = .13$, $p = .04$ (see Table 2). Though significant, these relationships are small, indicating some (2% to 3%) shared variance but considerable independence. Similar levels of association were achieved when ISCol subscales were considered separately, with correlations ranging from a low of $r(277) = .003$, $p = .96$, to a high of $r(277) = .24$, $p < .001$. This indicates a maximum of 6% overlap in variance between ISCol factors and Triandis subscales or, conversely, at least 94% independence.

Exploratory factor analysis. Subscale scores from both measures were entered into an exploratory factor analysis. Table 2 presents the inter-correlations among the ISCol and Triandis subscales. A two factor solution with ISCol subscales loading on one factor and Triandis' items loading on the other was predicted. Principle components analysis extracted three factors with eigen values greater than 1.00 which were subjected to oblimin rotation. Table 3 displays the factor pattern matrix for this solution.

Factor 1 is made up five of the six ISCol subscales and none of the Triandis subscales. Emotional attachment (factor loading = .87), norms and standards (factor loading = .84), behavioral involvement (factor loading = .78), common fate (factor loading = .71) and social identity (factor loading = .70) load on this factor. The second factor consists of three of Triandis' collectivism subscales but none of ISCol's subscales.

Horizontal collectivism (factor loading = .80), vertical collectivism (factor loading = .78) and horizontal individualism (factor loading = .50) define this factor. The final factor contains two subscales, one from each of the measures of collectivism: Triandis' vertical individualism (factor loading = .81) and ISCol's comfort with the collective (factor loading = -.58).

These factors are very clean, with secondary loading surpassing .30 only once. Intercorrelations among the factors are small as well. The correlation between ISCol and Triandis factors is small, r(277) = 0.09. The factor composed of subscales from both scales does not correlate highly with either the ISCol factor, r(277) = -.12, or the Triandis factor, r(277) =

-.01.

Though not exactly as predicted, these results are in line with theory. With two notable exceptions, subscales load separately on their respective constructs, indicating at least some degree of independence of the constructs. The only exceptions to this finding are ISCol's comfort with the collective subscale and Triandis' vertical individualism factor, which load together on a third factor.

Confirmatory factor analysis. AMOS 3.61 (Arbuckle, 1997) for SPSS Windows 7.0 was used to carry out a confirmatory factor analysis on the data. Confirmatory factor analysis is used to test predictions about the relationships among a set of variables. A model with two common factors, group sensitive collectivism (ISCol) and personality specific collectivism (Triandis), was specified. The six observed ISCol factors were modeled to load on ISCol. The two collectivism factors from Triandis (1995), horizontal

collectivism and vertical collectivism, were modeled to load on Triandis. For each observed variable, a unique variable was specified to account for variance not due to one of the underlying collectivism constructs. This model will be referred to as the unrestrained model because restraints were not imposed upon the relationship between the two common factors. This model and its estimated parameters are presented in Figure 1.

A single, accepted measure of fit for the overall model does not exist for confirmatory factor analysis (Long, 1991). Consequently, results of several indices are considered to determine fit. Overall, these suggest a pretty good fit between the data and the model, with eight of the twelve indices reaching or surpassing criteria levels for "reasonable" significance (see Table 4).

Collectivism factors load well on their respective constructs. With only one exception, subscale loadings are above the minimal standard of 0.60 (Bagozzi & Yi, 1988). The one exception is the Comfort with the Collective subscale which has a less than adequate loading of 0.36 on ISCol. This is consistent with findings reported earlier in this manuscript that Comfort with the Collective does not behave the same way as other ISCol factors.

It is predicted that even though ISCol and Triandis are related by common subject matter, they tap distinct aspects of collectivism. The parameter estimate for the correlation between the two constructs is in line with this prediction, reaching only a moderate 0.32. A further test of the discriminant validity between the two constructs was carried out by comparing the chi-square statistic from the current model (the unrestrained

model) to the chi-square statistic from a model that assumes that the two constructs are not distinct (Long, 1991). This alternative model (the restrained model) is nested in the first; the only difference being that the two common factors are assumed to be perfectly correlated. This model and its estimated parameters are presented in Figure 2.

By comparing the magnitude of each model's chi-square, we can test whether either of the two models fits the data better than the other. Superiority of the unrestrained model is evidence of divergent validity between the two constructs. A finding of equality between the models would indicate that the two constructs are not in fact distinct and, therefore, that group sensitive collectivism does not measure anything different than personality-based collectivism.

The unrestrained model with freely estimated correlation yielded a chi-square of 75.35 (19 d.f.). The restrained correlation model yielded a chi-square of 169.75 (20 d.f.). The difference between the two (169.75 - 75.35) equals 94.40. With 1 degree of freedom (20 d.f. - 19 d.f.), this difference is greater than the critical chi-square value of 3.84 (1 d.f., alpha = 0.05), suggesting discriminant validity for the two measures, ISCol and Triandis.

Test-retest reliability.

Sixty one respondents completed ISCol in reference to the same group membership at both study sessions (two weeks apart). The correlations between ISCol at Time 1 and ISCol at Time 2 for these respondents can be found in the column labeled "Same" in Table 5. Correlations for the overall scale as well as subscales are significant in the predicted direction, well surpassing the $p<.001$ mark in every case. For the overall

scale, the test-retest reliability estimate is $r(61) = .79$, $p < .001$. Estimates for the subscales range from $r(61) = .53$, $p < .05$, for the comfort with the collective subscale to $r(61) = .81$, $p < .001$, for the social identity subscale.

Ability to discriminate among social groups.

Sixty six respondents completed ISCol in reference to different group memberships at Time 1 and Time 2. The correlations between ISCol at Time 1 and ISCol at Time 2 for these respondents can be found in the column labeled "Different" in Table 5. If ISCol really does measure collective orientation toward specific target groups not a generalized personality disposition, then responses made in reference to one group should have little or nothing to do with responses made in reference to another group.

For the most part, correlations support this hypothesis, with the different group correlations failing to reach significance for the overall scale and for the social identity, common fate, behavioral involvement and emotional attachment subscales, all $p > .05$. Significant correlations between ISCol completed in reference to different groups were found for the comfort with the collective, $r(66) = .50$, $p < .001$, and norms and standards, $r(66) = .36$, $p < .05$, subscales.

To further test this hypothesis, I compared the magnitude of correlations based on the same identity (which are predicted to be high) with those based on different identities (which are predicted to be low). The z scores presented in Table 5 test the magnitude of the difference between these two correlations. All z's are predicted to be positive and significant.

The correlation between ISCol at Time 1 and ISCol at Time 2 for respondents in

the same identity condition, $r_{same}(61) = .79$, is significantly stronger than the correlation for respondents in the different identity condition , $r_{different}(66) = .11$, $z = 5.4$, $p < .001$. The same pattern holds true for five of the six subscales: social identity, $r_{same}(61) = .81$, $r_{different}(66) = .02$, $z = 6.2$, $p < .001$; Common Fate, $r_{same}(61) = .65$, $r_{different}(66) = .20$, $z = 3.2$, $p < .001$; Behavioral Involvement, $r_{same}(61) = .73$, $r_{different}(66) = -.13$, $z = 5.8$, $p < .001$; Norms and Standards, $r_{same}(61) = .76$, $r_{different}(66) = .36$, $z = 3.4$, $p < .001$; Emotional Attachment, $r_{same}(61) = .75$, $r_{different}(66) = .17$, $z = 4.3$, $p < .001$. Only on a single subscale, Comfort with the Collective, did the difference between the two correlations fail to reach significance, $r_{same}(61) = .53$, $r_{different}(66) = .50$, $z = 0.2$, $p = .49$. Each of these correlations was significant in its own right, both $p < .001$.

Relationship between ISCol and other group-level variables.

If ISCol measures an orientation toward a specific group rather than a general personality characteristic or culturally determined way of being, then it should be able to predict attitudes and beliefs about that group better than it predicts attitudes about some other group. To test this, correlations between ISCol and the three other group-specific measures administered at Time 1 (Attention, Evaluation and Similarity) were calculated separately for respondents who completed all four of the measures in reference to the same group (*same group Time 1* condition) and respondents who completed the three group-level scales in reference to a membership other than that used for ISCol (*different group Time 1* condition). Correlations from the same group condition are predicted to be significantly higher than correlations from the different group condition.

Table 6 summarizes the results of this analysis. Same group correlations between

ISCol and Attention are significantly stronger than different group correlations for the overall scale, $r_{same} = .46$, $r_{different} = .11$, $z = 3.2$, $p < .001$, and for the subscales Behavioral Involvement, $r_{same} = .37$, $r_{different} = .01$, $z = 3.2$, $p < .001$, norms and standards, $r_{same} = .55$, $r_{different} = .10$, $z = 4.3$, $p < .001$, and Emotional Attachment, $r_{same} = .39$, $r_{different} = .19$, $z = 1.9$, $p < .05$. Though not statistically significant, the difference between same and different group correlations for the Social Identity subscale is in the right direction and tends toward significance, $r_{same} = .25$, $r_{different} = .08$, $z = 1.4$, $p = .08$. Tests of significance for Common Fate and Comfort with the Collective were in the predicted direction but not significant, both $p > .18$.

Same group correlations between ISCol and Evaluation are significantly stronger than different group correlations for the overall scale, $r_{same} = .43$, $r_{different} = .09$, $z = 3.2$, $p < .001$, and for the subscales Social Identity, $r_{same} = .44$, $r_{different} = .11$, $z = 3.0$, $p < .01$, Common Fate, $r_{same} = .34$, $r_{different} = .10$, $z = 2.0$, $p < .05$, Norms and Standards, $r_{same} = .31$, $r_{different} = .02$, $z = 2.5$, $p < .01$, and Emotional Attachment, $r_{same} = .45$, $r_{different} = .18$, $z = 2.6$, $p < .01$. Though not statistically significant, the difference between same and different group correlations for Comfort with the Collective are in the right direction and tend toward significance, $r_{same} = .22$, $r_{different} = .07$, $z = 1.3$, $p = .09$. The significance test for Behavioral Involvement was not significant, $p > .12$.

Same group correlations between ISCol and Similarity are significantly stronger than different group correlations for the overall scale, $r_{same} = .57$, $r_{different} = .27$, $z = 3.1$, $p = .001$, and for the subscales Social Identity, $r_{same} = .45$, $r_{different} = .16$, $z = 2.7$, $p = .003$, Norms and Standards, $r_{same} = .44$, $r_{different} = .13$, $z = 2.9$, $p = .002$, and Emotional

Attachment, $r_{same} = .56$, $r_{different} = .32$, $z = 2.5$, $p = .007$. Tests of significance for Comfort with the Collective, Behavioral Involvement and Common Fate were in the predicted direction but not significant, all $p > .10$.

To further test the group specific nature of ISCol, the correlations between Triandis' (1995) personality measure and the group level measures of attention, evaluation, and similarity were examined. Given that the Triandis measure taps a general personality characteristic not a group specific orientation, these correlations are predicted to be small in comparison to those involving ISCol factors. This prediction was supported in all cases. Only three of the correlations were even significant. Vertical collectivism correlates significantly with evaluation, $r_{Triandis}(143) = .22$, $p = .01$, and attention, $r_{Triandis}(144) = .25$, $p = .003$. Horizontal collectivism correlates with evaluation, $r_{Triandis}(143) = .26$, $p = .002$. None of the other correlations reached significance, all $p > .05$.

The difference between correlations based on the Triandis personality measure and those based on overall ISCol were compared. All but one set of correlations were significantly different in the predicted direction. Group evaluation correlates with overall ISCol more than it correlates with horizontal individualism, vertical and horizontal collectivism, all $p > .05$. Perceived similarity and attention to the ingroup both correlates with overall ISCol more than with any of the Triandis (1995) subscales, all $p < .05$. The only sets of correlations that did not differ significantly in the predicted direction involved group evaluation. The correlation between ISCol and evaluation, $r(133) = .43$, and the correlation between horizontal collectivism and evaluation, $r(143) = .26$, do not

differ significantly though the difference was marginally significant in the predicted direction. $z = 1.39$, $p = .08$. This further demonstrates group sensitive collectivism's ability to predict other group-related attitudes above and beyond that of a personality-based measure.

Discussion

ISCol was shown to have very good reliability. Indices of internal consistency were strong ranging from $a = .92$ for the overall scale to $a = .69$ for the common fate factor. In addition, the large correlation between ISCol administered at two different points in time suggests that ISCol has strong test-retest reliability. Test-retest estimates varied from one subscale to another, ranging from .81 for the Social Identity factor to .53 for the Comfort with the Collective factor. Two alternative explanations of this finding exist. It may be that ISCol is not equally reliable across each of its six subscales. It may also be that some aspects of collectivism are more likely to fluctuate with time. In other words, the obtained subscale differences are reflective of something real; of actual changes in group collectivism over time. Future studies are needed to determine which of these alternatives is correct.

A number of predictions regarding the validity of ISCol were tested in this study. I attempted to examine the relationship between ISCol and an existing, personality-based measure of collectivism. The results of this inquiry were mixed and somewhat difficult to interpret. Correlational and exploratory factor analytic approaches to this problem supported the prediction that ISCol and Triandis factors are relatively independent. Correlations between ISCol factors and Triandis factors were statistically significant but

small, suggesting between 0% and 6% shared variance among the various factors. These results suggest that despite their shared subject matter, the two measures tap separate aspects of collectivism.

Exploratory factor analysis paints a somewhat different picture, though still suggests a greater degree of independence than overlap between the two measures. In this analysis, three factors were extracted. Two of these factors were, as predicted, made up exclusively of ISCol factors or Triandis factors. The third factor is out of line with predictions as it is made up of one factor from each of the two scales.

Triandis' vertical individualism loads positively on this factor. According to Triandis (personal communication), vertical individualists are "competitive and seek not only independence from their groups but also distinction". Subscale items involve themes of competition and winning at all costs. Comfort with the collective from ISCol loads negatively on this factor. Collectivists high in comfort with the collective feel connected to other group members and enjoy working with them on common tasks.

The fact that the independent and competitive personality of the vertical individualist is negatively associated with a tendency to feel connected to and cooperate with the other members of a particular group is not difficult to understand. Though I maintain that personality and group specific collectivism are different, it is possible for personality-based collectivism to affect group level collectivism. All I suggest is that the personality characteristic does not account for all of the within culture variation in collectivism. In fact, both the correlational analysis described above and the exploratory analysis suggest that this is just the case.

It is also possible that the tendency toward comfort with the collective is rooted in personality to a greater extent than the orientations described by the other ISCol factors. This too would explain why the comfort factor does not vary as a function of changes in the group membership targeted to the same extent as the other factors.

Confirmatory factor analytic results support the prediction that group collectivism and personality collectivism are independent. The model in which the two constructs were assumed to be equivalent did not fit the data as well as the model in which the two constructs were not so constrained.

I also examined ISCol's ability to discriminate between different group memberships. Three predictions were tested. First, in a short term longitudinal study, ISCol scores at Time 1 were shown to predict ISCol scores at Time 2 more strongly when the same group membership was considered both times than when different group memberships were considered. Second, group specific collectivism predicts other attitudes toward the same group better than it predicts attitudes toward some other group. Finally, group specific collectivism predicts other group attitudes better than collectivism measured as a personality characteristic. Combined, these findings demonstrate two things. First, that collectivism varies at the group level, as well as at the level of the individual and the culture. Second, that ISCol picks up on this level of variation.

Throughout all aspects of Study 1, comfort with the collective has shown itself to be more generalizable and less group specific than the other subscales. First, test-retest estimates for ISCol when the same group versus different groups were considered did not differ significantly for the comfort with the collective subscale. Similarly, the

relationship between comfort with the collective and the three group level measures attention, similarity and evaluation did not differ when the same group versus a different group was considered. Finally, comfort with the collective did not load with the other ISCol subscales in the exploratory factor analysis. Instead, it formed its own factor with vertical individualism. It is possible that comfort with the collective is not as group specific as the other subscales, but rather is under the control of a more generalizable personality disposition. This prediction will have to be tested on an independent sample for verification.

Study 2: Differences Between Groups

The placement of units along the collectivism dimension has been a primary goal of researchers ever since collectivism was introduced to the literature. Hofstede (1980) and later Triandis (Triandis et al., 1986) and others (Morling et al., 1993) have attempted to locate countries on dimensions of collectivism. A country's rank has subsequently been related to a variety of country (Hofstede, 1980), group (e.g., Bond, Wan, Leung, and Giacalone, 1985; Hui, Triandis, and Yee, 1991; Leung & Bond, 1982; Leung & Iwawaki, 1988; Triandis, Brislin, and Hui, 1988) and individual level (e.g., Hui & Villareal, 1989; Kashima, Seigal, Tenaka, and Kashima, 1992; Markus & Kitayama, 1991; Trafimow, Triandis, & Goto, 1991) outcomes.

Hinkle and Brown (1990; Brown, Hinkle, Ely, Fox-Cardamone, Maras, and Taylor, 1992) postulate that groups, too, can be ranked in terms of collectivism. According to their taxonomy, a group's level of collectivism has implications for not only how members perceive outgroups but how they treat and interact with them as well.

Unfortunately, efforts to look at group differences in collectivism have been hampered by the absence of appropriate (i.e., group specific) measures of collectivism. Study 2 was designed to fill this gap by ranking groups according to a group sensitive measure of collectivism.

In this study, respondents completed an Internet version of ISCol. Data were collected over the World Wide Web (WWW) for several reasons. First, data collection on the WWW is inexpensive both in terms of money and time. Second, hypertext markup language (html), the computer language used to created web based documents, makes it possible to create an automated version of ISCol. Rather than having to mentally "fill in the blanks" in order to complete the questionnaire, respondents merely clicked on their chosen identity to reveal an already filled in version of the questionnaire. Third, WWW respondents were expected to be demographically diverse or at least different in comparison to first year undergraduate students. Fourth, WWW respondents should be highly motivated to complete the study, as they actively seek out the opportunity. Finally, anonymity is guaranteed in Web based studies, minimizing the effect of demand characteristics (Hewson, Laurent & Vogel, 1996).

Web based data collection methods have only recently started to gain popularity. This is likely due to the increased availability of Internet resources such as access to electronic mail, server storage space for web pages and software designed to facilitate the creation of html documents. Web based studies have been conducted with some documented success. For example, electronic mail has been used to replicate lost-letter studies (Stern & Faber, 1997) and conduct a worldwide opinion poll with a 90% response

rate after only four days (Swoboda, Muhlberger, Weikunat & Schneeweiss, 1997). In another study, results of identical experiments conducted either in a laboratory or on WWW were similar enough to suggest that the Internet provides a valid experimental medium (Krantz, Ballard & Scher, 1997). The Internet may be especially useful for gathering information about sensitive topics (Hewson, Laurent & Vogel, 1996) or stigmatized groups (McKenna & Bargh, in press).

Two approaches are used to analyze the data. In the group approach, groups are compared in terms of overall collectivism. In addition, patterns of variation for each group on each of ISCol's subscales are examined to test the predictions that type of collectivism as well as amount of collectivism varies from one group to the next. For some groups common fate may be the defining element of collectivism whereas for others it may be emotional attachment or behavioral involvement or both. These analyses are restricted to those groups in reference to which a sufficient number of respondents completed ISCol.

In the cluster approach groups are organized based on the Deaux et al. (1995) identity clusters. Groups are first identified as belonging to one of the following six group clusters: (a) gender, (b) sexual orientation, (c) ethnicity and nationality, (d) religion, (e) occupation and avocation and (e) political affiliation. Analyses focus on identifying differences in amount of collectivism between clusters and on variations in the nature of collectivism within clusters. By chunking groups in this way, all groups are included in the analysis and patterns of similarity as well as difference can be examined.

Group level collectivism should relate to a variety of group-related behaviors and

attitudes. To explore this issue, respondents also completed a set of questions designed to measure group pride, group involvement, perceived similarity and identity importance. A group's level of collectivism is predicted to correlate significantly with that group's pride, perceived homogeneity, membership activity and identity importance.

Methods

Subjects

Respondent were the 361 visitors (62% female) to the ISCol web page who completed the survey on-line.[1] The mean age of respondents was 30.3. Three quarters of respondents labeled themselves Caucasian. Other ethnicities represented in the sample include Black or African-American (5%), Chinese (3%), Jewish (3%), Filipino (2%), Hispanic/Latino (2%) and "mixed" (3%). The remaining respondents either listed some other ethnicity (4%) or failed to provide any information (3%). Seventy five percent of respondents lived in the United States, with residents of 43 states represented. Respondents from 26 other countries including Canada, Australia, the United Kingdom and Germany made up the remaining 25% of the sample. The diversity of the sample reflects the fact that data were collected on the Internet.

Materials

html:ISCol. A World Wide Web version of ISCol (html:ISCol; see Appendix H) was created by translating ISCol into hypertext markup language (html). html:ISCol is saved on a web site and can be accessed by pointing a browser to *http://www.geocities.com/CollegePark/Quad/6098*. It is best viewed with Microsoft Internet Explorer.

ISCol was altered only as necessary to optimize it for on-line completion. Visitors are greeted with a screen containing a general introduction, instructions for completing the questionnaire and a list of target group memberships to choose from (see Figure 3). Respondents select a group membership by clicking on it with their mouse. Clicking on a group membership brings up on the screen a version of html:ISCol tailored to that particular group. For example, clicking on the group "Feminist" brings onto the screen a copy of html:ISCol in which "feminist" has already been inserted in the blank spaces. Responses are indicated on a 7-point scale where 1 = strongly disagree and 7 = strongly agree. High scores correspond to high collectivism. Overall scale reliability is excellent, $\underline{a}$ = .92. Subscale reliabilities range from moderate $\underline{a}$ = .76 to high $\underline{a}$ = .84 (see Table 7). These reliability estimates are comparable to those obtained in Study 1.

Importance. Importance of identity is measured by a single item, "How important to you is your _____ identity? ". Responses are given on a 5-point scale, not at all important to extremely important. High scores correspond to high importance.

Activity. Group-related activity is measured by a single item, "How often do you engage in activities related to being a(n) ____?". Responses are given on a 5-point scale, never to almost all of the time. High scores correspond to high activity.

Similarity. Perceived similarity of self to the ingroup is measures by a single item, "How similar are you to other _____s?". Responses are given on a 5-point scale, not at all similar to extremely similar. High scores correspond to high perceived similarity.

Pride. Group pride is measures by a single item, "How proud are you of your

_____ identity?". Responses are given on a 5-point scale, not at all proud to extremely proud. Higher scores correspond to higher pride.

Procedure

Subject recruitment. Respondents were recruited from a variety of listserves, newsgroups, on-line psychology sites and search engines accessible through the Internet. Table 8 lists the listserves, newsgroups, on-line psychology sites and search engines that referred at least one respondent to html:ISCol. First, a solicitous e-mail was sent to computer newsgroups and listserves based on or at least with memberships likely to identify with targeted groups. For example, members of the newsgroup soc.men were invited to complete html:ISCol in reference to their "man" identity while members of soc.feminism were invited to complete it in reference to "feminist". This was the most effective strategy, accounting for 30% of all respondents. Its other advantage is that it allows specific groups to be targeted for inclusion.

Second, html:ISCol was listed on a number of web sites dedicated to on-line psychology experiments such as the American Psychological Society (APS) home page. This is a catch as catch can approach in that it offers little opportunity to target specific groups. On the other hand, visitors to on-line psychology sites may be more likely to complete the questionnaire once they find it.

Third, html:ISCol was listed with over 100 of the many search engines available on the Web. Search engines are like electronic library catalogues, allowing surfers to locate information on the Web that is of interest and avoid the billions of bytes of information that are not. The goal was to list ISCol in such a way that it would be found

every time someone did a search on one of the targeted groups. Though subsequent tests by the author suggest that this goal was not accomplished in all cases, participants who arrived at the study site through this source likely did so because they were searching for information on a particular group.

Results

Data are analyzed in three ways. In the first two approaches, repeated measures analysis of variance (ANOVA) is used to examine between group and between group-cluster differences in collectivism. In the third, relationship between collectivism and other group characteristics such as membership pride, activity, and perceived homogeneity is explored.

Between Group Approach

Analyses were restricted to the eight groups in reference to which at least 14 respondents completed ISCol: Woman (n = 67); lesbian (n = 43); man (n = 27); feminist (n = 14); bisexual (n = 23); gay (n = 27); Black or African-American (n = 15); Christian (n = 26). An eight between (group membership) by six within (ISCol subscale) analysis of variance (ANOVA) was carried out on the data.

A significant main effect of ISCol factor, $F(5, 1170) = 248$, $p < .001$, suggests mean differences in ISCol factors, regardless of the group in reference to which the scale was completed (see the between group columns of Table 9). Paired sample t-tests indicate that social identity, $M = 5.97$, is the strongest aspect of collectivism among this sample. Emotional attachment, $M = 5.24$, and comfort with the collective, $M = 5.15$, are the next strongest, followed by common fate, $M = 4.27$, and behavioral involvement, $M =$

4.19. Norms and standards, M = 3.43, is the lowest of the six factors.

A group membership main effect was also found, F(7, 234) = 10.4, p < .001, indicating that different levels of collectivism are associated with different group memberships (see Table 10). Scheffe post-hoc analyses indicate that Christians, M = 5.36, are more collective than bisexuals, M = 4.04, men, M = 4.11, gays, M = 4.36, and women, M = 4.69. Blacks/African-Americans, M = 5.17, feminists, M = 5.11, and lesbians, M = 4.84, are the next most collective groups, with higher mean scores than bisexuals, and men. Bisexuals and men are the least collective, with lower mean scores than two thirds or more of the remaining groups.

Also present is a significant interaction between collectivism factor and group, F(35, 1170) = 2.9, p < .001. To simplify the interpretation of this interaction, I will break it down into a set of simple effects. First, I consider differences between groups for each factor of ISCol. Do groups differ for each factor of ISCol? Are patterns of group differences consistent across each factor? Second, I look within groups and examine the relative strength of each collectivism factor for each group. Which components of collectivism are strong for women or Blacks or Christians? Which are weak?

Differences between groups. A one-way ANOVA with group as the independent variable was conducted for each of ISCol's factors. The main effect of group was significant for each of the six factors: social identity, F(7,241) = 8.86, p < .001; common fate, F(7,241) = 10.49, p < .001; comfort with the collective, F(7,241) = 2.52, p = .02; behavioral involvement, F(7,241) = 8.16, p < .001; norms and standards, F(7,241) = 3.65, p = .001; emotional attachment, F(7,241) = 8.39, p < .001.

Scheffe post-hoc analyses are used to identify which group means differ (see Table 10). For the social identity factor, Christians, M = 6.51, were highest in collectivism, differing significantly from men, M = 5.59, gays, M = 5.40, and bisexuals, M = 5.19. Blacks/African-Americans, M = 6.37, feminists, M = 6.36, women, M = 6.18, and lesbians, M = 6.12, were moderate in social identity, differing only from the lowest scoring group, bisexuals. Thus, compared to the other groups included in this analysis, Christians derive the greatest sense of group identity from their membership.

Christians, M = 5.28, and Blacks/African-Americans, M = 5.30, stand out in common fate. These two groups report higher common fate than women, M = 4.08, men, M = 3.48, gays, M = 3.84, and bisexuals, M = 3.65. Feminists, M = 4.90, scored moderate in common fate, differing significantly from men but none of the other groups.

None of the groups differed in terms of comfort with the collective, all p > .15. On this factor, group means were similar, ranging from a low of 4.61 for gays to a high of 5.69 for Christians. This lack of group differences on this factor parallels findings from Study 1 that comfort with the collective is more generalized and less group specific that the other ISCol factors.

Groups did differ in terms of behavioral involvement, though. Feminists, M = 5.15, and Blacks/African-Americans, M = 5.06, scored highest on behavioral involvement, differing significantly from men, M = 3.14, and bisexuals, M = 3.45. Women, M = 4.20, lesbians, M = 4.53, and Christians, M = 4.66, scored moderate on behavioral involvement, differing only from men.

Group effects on norms and standards are defined by the difference between

Christians on the high end, $M = 4.11$, and bisexuals, $M = 2.73$, on the low end. None of the other group comparisons were significant. Christians, $M = 5.94$, are also highest in emotional attachment, outscoring men, $M = 4.48$, bisexuals, $M = 4.54$, and gays, $M = 4.86$. Lesbians, $M = 5.55$, and Blacks/African-Americans, $M = 5.73$, are moderate in emotional attachment, scoring higher than men and bisexuals but not gays.

Differences within groups. Eight one-way within subjects ANOVAs with ISCol factor as the independent variable were conducted, one for each of the 8 groups. ISCol factors differed significantly for each of the groups: women, $F(5,330) = 104.8$, $p < .001$; lesbians, $F(5,210) = 69.43$, $p < .001$; men, $F(5,130) = 36.75$, $p < .001$; feminists, $F(5,65) = 21.41$, $p < .001$; bisexuals, $F(5,110) = 31.38$, $p < .001$; gays, $F(5,130) = 21.96$, $p < .001$; African-Americans, $F(5,70) = 29.46$, $p < .001$; Christians, $F(5,125) = 31.37$, $p < .001$.

A series of planned t-tests were used to locate the source of these main effects. A stringent significance level, $p < .005$, was used to adjust for multiple comparisons. The rank order of factors for women and lesbians is: (a) social identity; (b) emotional attachment and comfort with the collective; (c) common fate and behavioral involvement; (d) norms and standards. This ordering is identical to that found when the entire sample rather than individual groups are considered.

The rank order of factors for the other groups varies slightly from this pattern. For men, common fate, $M = 3.48$, norms and standards, $M = 3.19$, and behavioral involvement, $M = 3.14$, do not differ significantly from each other, all $p > .05$. For feminists, comfort with the collective, $M = 5.02$, does not differ significantly from behavioral involvement, $M = 5.14$, $t(13) = .41$, $p = .69$, but does differ significantly from

common fate, $\underline{M} = 4.90$, $\underline{t}(13) = 4.03$, $\underline{p} = .001$. For bisexuals, social identity, $\underline{M} = 5.19$, was not significantly higher than comfort with the collective, $\underline{M} = 4.71$, $\underline{t}(22) = 1.68$, $\underline{p} = .11$. For gays, norms and standards, $\underline{M} = 3.30$, was not significantly lower than common fate, $\underline{M} = 3.84$, $\underline{t}(26) = 2.00$, $\underline{p} = .06$. For Blacks/African-Americans, emotional attachment, $\underline{M} = 5.73$, comfort with the collective, $M = 5.53$, common fate, $\underline{M} = 5.30$, and behavioral involvement, $\underline{M} = 5.06$, cluster together. Finally, for Christians, common fate, $\underline{M} = 5.28$, does not differ from comfort with the collective, $\underline{M} = 5.69$, $\underline{t}(25) = 1.54$, $\underline{p} = .14$. All other tests of significance are the same as for the overall model.

Relationship to other group attitudes. For each group, a mean collectivism, activity, importance, pride and similarity score was calculated. Correlations among these variables were examined to determine whether group differences in collectivism are related to other group characteristics. Mean group scores on social identity were significantly related to activity, $\underline{r}(9) = .90$, $p = .001$, importance, $\underline{r}(9) = .93$, $\underline{p} < .001$, group pride, $\underline{r}(9) = .93$, $\underline{p} < .001$, and perceived similarity, $\underline{r}(9) = .89$, $\underline{p} = .001$. In other words, groups whose members score high on social identity also tend to have members who are active, consider their group membership important, have pride in their membership and perceive themselves to be similar to each other.

Similar correlations were found for of the remaining factors. Mean group common fate is significantly related to activity, $\underline{r}(9) = .91$, $\underline{p} = .001$, importance, $\underline{r}(9) = .93$, $\underline{p} < .001$, group pride, $\underline{r}(9) = .86$, $\underline{p} = .003$, and perceived similarity, $\underline{r}(9) = .91$, $\underline{p} = .001$. A group's mean behavioral involvement score is significantly related to activity, $\underline{r}(9) = .73$, $\underline{p} = .03$, importance, $\underline{r}(9) = .82$, $\underline{p} = .006$, group pride, $\underline{r}(9) = .71$, $\underline{p} = .03$, and

perceived similarity, $r(9) = .82$, $p = .007$. Mean group emotional attachment is significantly related to activity, $r(9) = .88$, $p = .002$, importance, $r(9) = .91$, $p = .001$, group pride, $r(9) = .87$, $p = .002$, and perceived similarity, $r(9) = .94$, $p < .001$. A group's mean score on norms and standards, on the other hand, was less related to other group attitudes, correlating significantly with activity, $r(9) = .76$, $p = .02$, and perceived similarity, $r(9) = .73$, $p < .03$, but not importance, $r(9) = .43$, $p = .25$, or group pride, $r(9) = .39$, $p = .29$.

Between Cluster Approach

For this set of analyses, the clusters identified by Deaux et al. (1995) were used to classify the group members in reference to which group respondents completed ISCol. These analyses differ from the previous set in that differences between group categories (e.g., sexual orientation versus gender) rather than specific groups (e.g., lesbians versus men) are sought. Table 11 presents a list of the groups associated with each cluster. A six between (group-cluster) by six within (ISCol factor) ANOVA was carried out on the data.

A significant main effect of ISCol factor, $F(5,1765) = 329$, $p < .001$, indicates differences in strength among the components of group-level collectivism regardless of the group-cluster under consideration (see the between cluster columns of Table 9). A series of paired samples t-tests were conducted to locate the source of this effect. As can be seen, social identity, $M = 5.92$, is the dominant aspect of collectivism across clusters, differing significantly from emotional attachment, $M = 5.21$, and comfort with the collective, $M = 5.20$, the next strongest factors, $t(360) = 21.04$, $p < .001$. Emotional

attachment and comfort with the collective do not differ significantly from each other, $t(360) = .13$, $p = .90$. Nor do common fate, $M = 4.25$, and behavioral involvement, $M = 4.16$, $t(360) = 1.40$, $p = .16$. Emotional attachment and comfort with the collective, combined M = 5.21, differ significantly from common fate and behavioral involvement, combined $M = 4.20$, $t(360) = 24.89$, $p < .001$. Norms and standards, $M = 3.40$, is the least prominent factor, as it differs from the next to last factor, behavioral involvement, $t(360) = 11.54$, $p < .001$.

A main effect of cluster is also present, $F(5,353) = 329$, $p < .001$, suggesting that the clusters differ in overall collectivism level. Scheffe post-hoc analyses were carried out on the data to locate the source of this effect. Table 12 displays the mean collectivism score and standard deviation for each cluster. As can be seen, religious groups, $M = 5.20$, are the most collective, differing significantly from groups based on sexual orientation, $M = 4.53$, gender, $M = 4.48$, and occupations and hobbies, $M = 4.44$. Groups based on political affiliation, $M = 5.09$, are next with ethnicity and nationality groups, $M = 4.88$, firmly in the middle.

As expected, the interaction between group-cluster and ISCol factor was also significant, $F(5,353) = 329$, $p < .001$. To simplify the interpretation of this interaction, I again break it down into a set of simple effects. First, I consider differences between group clusters for each factor of ISCol. Do clusters differ for each factor of ISCol? Are patterns of cluster differences consistent across each factor? Second, I look within group clusters and examine the relative strength of each collectivism factor for each cluster.

Which components of collectivism are strong for gender groups or occupation groups? Which are weak?

Differences between clusters. A one-way ANOVAs with cluster as the independent variable was conducted for each factor of collectivism. The overall effect of cluster was significant for each of the six factors: social identity, $F(5,358) = 5.41$, $p < .001$; common fate, $F(5,358) = 11.26$, $p < .001$; comfort with the collective, $F(5,358) = 6.02$, $p < .001$; behavioral involvement, $F(5,358) = 5.39$, $p < .001$; norms and standards, $F(5,358) = 7.98$, $p < .001$; emotional attachment, $F(5,358) = 5.88$, $p < .001$.

Scheffe post-hoc analyses are used to identify which clusters differ from each other. For the social identity factor, religious groups, $M = 6.35$, were higher in collectivism than occupation and hobby groups, $M = 5.46$, as well as groups based on sexual orientation, $M = 5.71$. Thus, members of religious groups derived a greater sense of group identity from their membership than respondents whose membership was based on their sexual orientation or their occupation or hobby.

Religious group members, $M = 4.99$, are also highest in common fate. Religious groups have a greater sense of common fate than sexual orientation, $M = 4.07$, occupation or hobby, $M = 3.69$, and gender, $M = 3.92$, groups. In addition, ethnicity and nationality groups, $M = 4.59$, had significantly more common fate than gender and occupation or hobby groups. Political groups, $M = 4.68$, were somewhat high in common fate, proving to be significantly different from occupation or hobby groups, the cluster with the least amount of common fate.

Cluster effects in comfort with the collective are defined by the difference

between religious, M = 5.66, and ethnicity/nationality , M = 5.67, groups on the high end and gender, M = 4.95, and sexual orientation, M = 4.92, groups on the low end. None of the other comparisons were significant.

Political groups, M = 4.89, emerge as highest in behavioral involvement, differing significantly from gender, M = 3.84, and occupation or hobby groups , M = 3.71. Ethnicity and nationality groups, M = 4.61, are also high in behavioral involvement, though they only differ significantly from one cluster, gender. Interestingly, the religious group cluster , M = 4.31, that has been highest in collectivism on all other factors and the sexual orientation cluster, M = 4.18, which has been among the lowest, do not emerge as either high or low in behavioral involvement.

Not surprisingly, the religious group cluster dominates in terms of norms and standards and emotional attachment. Religiously based groups, M = 4.11, recognize and adhere to group-based norms and standards to a greater extent than do sexual orientation groups, M = 3.15, ethnic and nationality groups, M = 3.17, and gender groups, M = 3.24. Similarly, emotional attachment was higher among religious group members, M = 5.78, than among gender, M = 4.96, occupation or hobby, M = 4.99, and sexual orientation, M = 5.14, group members.

Differences within clusters. Six one-way within subjects ANOVAs with ISCol factor as the independent variable were conducted, one for each of the 6 group-clusters. ISCol factors differed significantly for each of the group clusters: religious groups, $F(5,280) = 66.15$, $p < .001$; political groups, $F(5,120) = 29.03$, $p < .001$; sexual orientation groups, $F(5,495) = 127.08$, $p < .001$; gender groups, $F(5,505) = 144.50$, $p <$

.001; ethnicity and nationality groups, $F(5,225) = 73.74$, $p < .001$; occupation and hobby groups, $F(5,140) = 39.91$, $p < .001$.

A series of planned t-tests were used to locate the source of these main effects. The rank order of factors for the political affiliation, sexual orientation, and gender group-clusters is: (a) social identity; (b) emotional attachment and comfort with the collective; (c) common fate and behavioral involvement; (d) norms and standards. This ordering is identical to that found when the entire sample rather than individual clusters is considered.

The rank order of factors for the remaining group-clusters varies slightly from this pattern. For the religious group cluster, behavioral involvement, $M = 4.31$, is significantly lower than common fate, $M = 4.99$, $t(56) = 4.09$, $p < .001$, but not statistically different from norms and standards, $t(56) = 1.30$, $p < .20$. For ethnicity and nationality groups, comfort with the collective, $M = 5.67$, does not differ significantly from social identity, $M = 5.98$, $t(45) = 1.83$, $p = .08$, but does differ from emotional involvement, $M = 5.26$, $t(45) = 2.68$, $p = .01$. Finally, for occupations and hobbies, factors seem to clump into two bundles. The lower scoring of the two contains behavioral involvement, $M = 3.71$, common fate, $M = 3.70$, and norms and standards, $M = 3.51$, none of which differ significantly, all $p > .35$. The higher scoring contains social identity, $M = 5.46$, comfort with the collective, $M = 5.28$, and emotional attachment, $M = 4.99$. All other tests of significance are the same as for the overall model.

Relationship to other group attitudes. This set of analyses takes group clusters as the unit of analysis instead of the individual. For each cluster, a mean collectivism,

activity, importance, pride and similarity score was calculated. Correlations among these variables were examined to determine whether group cluster differences in collectivism are related to other group attitudes.

Mean group scores on social identity were significantly related to importance, $r(9) = .97$, $p = .001$, and group pride, $r(9) = .88$, $p = .02$, but not activity, $r(9) = .20$, $p = .70$, or perceived similarity, $r(9) = .51$, $p = .30$. Similar patterns of correlations were found for common fate and emotional attachment. Mean group common fate is significantly related to importance, $r(9) = .97$, $p = .001$, and group pride, $r(9) = .93$, $p = .008$, but not activity, $r(9) = .24$, $p = .65$, or perceived similarity, $r(9) = .70$, $p = .12$. Mean group emotional attachment is significantly related to importance, $r(9) = .91$, $p = .01$, and group pride, $r(9) = .93$, $p = .007$, but not activity, $r(9) = .48$, $p = .34$, or perceived similarity, $r(9) = .68$, $p = .13$.

For the norms and standards factor, a group cluster's collectivism level is related to activity, $r(9) = .88$, $p = .02$, and group pride, $r(9) = .85$, $p = .03$, but not importance, $r(9) = .62$, $p = .19$, or perceived similarity, $r(9) = .73$, $p = .10$. Mean scores on comfort with the collective correlated with only one other group attitude, group pride, $r(9) = .82$, $p = .05$. Behavioral involvement did not correlate significantly with any of the other group attitudes, all $p > .08$.

Discussion

Results of both the group-based and cluster based analyses suggest that collectivism varies not only between group memberships but also within group memberships. The main effect of group indicates that of the groups examined, Christians

are most collective and gays, bisexuals and men are the least collective. Cluster based analyses paint a similar picture, suggesting that religion based groups are the most collective and that sexual orientation, gender and occupation and hobby based groups are the least.

These patterns of group and group cluster differences are similar to those found by Deaux et al. (1995). In that study, respondents were asked to sort 64 cards each with a different social group printed on it into piles with similar themes. Another group of respondents then rated each group on a number of psychological dimensions, one of which was individualism-collectivism. Regression analyses suggested that ethnicity and religion groups anchored the collective end of this dimension and that occupations and hobbies anchor the individualistic end. This suggests that there is at least some overlap between group members self-report of collectivism and outsiders perceptions of a group's level of collectivism.

Despite general patterns of similarity between group-based and cluster based analyses, some interesting differences emerge. For example, although the sexual orientation cluster is among the lowest in collectivism, lesbians score higher than gay men and/or bisexuals on overall collectivism, social identity, behavioral involvement, and emotional attachment. Similarly, gender groups are among the lowest in collectivism, but women score higher than men on overall collectivism social identity and behavioral involvement.

This demonstrates a potential limitation of the clusters based approach. The clusters identified by Deaux et al. (1995) have a high degree of face validity and have

been shown here and elsewhere to predict various psychological outcomes. On the other hand, reliance on these clusters may mask important group differences. Other important dimensions may be equally if not more useful in explaining differences in collectivism (Deaux et al., 1995) and other group-related attitudes (Deaux, Reid, Mizrahi & Cotting, in press). Within each cluster, groups may differ in terms of such dimensions as their status in society, size or even the typical gender of its members. For example, within the ethnicity / nationality cluster, groups differ, often dramatically, in terms of size and status and privilege. Similarly, within the sexual orientation cluster, groups differ not only in terms of status and privilege but also in terms of the typical gender of its members. Unfortunately, a sufficient number of groups were not adequately represented in this study to examine these differences in more detail.

Some support for this contention comes from the correlations between mean group and cluster collectivism and mean group and cluster pride, importance, activity and perceived similarity. Despite reduced sample size and thus reduced statistical power, many more of the correlations between ISCol factors and the other attitudes were significant when individual groups rather than group clusters were considered. Though there is no way to test whether this trend is significant, the differences are suggestive.

Within group and within group cluster analyses are somewhat less complex. A relatively stable ranking of ISCol factors was revealed. Social identity was the strongest ISCol factor in the vast majority of comparisons. This is not particularly surprising, given that respondents were asked to choose a group membership important to their sense of self. The fact that data were collected over the Internet may have enhanced this effect

as well, as many respondents came across the questionnaire while seeking information on the target group in reference to which they completed ISCol. This implies a certain level of identification and attachment to the group.

Finally, the relatively uncommon use of the Internet as a medium for data collection must be touched upon. This methodology has many advantages. Most obviously, the World Wide Web provides access to respondents not easily accessible on a small budget. This study involved participants from many different countries and with many different professions, everything from an Australian chef to a wedding coordinator from Oregon to a French architect. Plus, there is no reason to believe that the sample obtained from the web, self selected as it is, is any less representative than samples drawn from introductory psychology classes or through other nonrandomized sampling procedures.

In addition, the web can be used to access relatively difficult to find populations. With relatively little effort, 43 lesbians, 23 bisexuals, 27 gay men and 8 transgendered individuals were recruited for this study. With more planned and focused efforts, the Internet can provide even more access to hard to reach groups. In fact, many small, stigmatized and/or special interest groups use the Internet as a way of meeting others with similar concerns and shared experiences (McKenna & Bargh, in press).

Respondents accessed through the web and those recruited from introductory psychology subject pools may differ in other ways as well. In contrast to their subject pool peers, web subjects may be more motivated to participate, having actually sought out the research instead of having it imposed upon them. This has additional implications

when issues of identification with a group are concerned. If this study had been conducted through a subject pool, respondents arriving at the experiment site would be asked to pick a group membership from a list. In many cases, the group they choose may have only moderate importance to them. As suggested above, respondents who seek out research regarding a particular group membership may identify with that group and be more invested in their membership.

This could be a beneficial or detrimental to the results of the study. On the one hand, respondents must have some level of connection to their group membership in order to complete a questionnaire about it -- they must at the very least consider themselves to be a member and have some sense of group membership. On the other hand, in order to obtain a fair degree of variability in respondent responses, a decent range of identification and investment in the group is necessary. If the scale is validated only on respondents who identify strongly with their group membership many important differences may be masked.

Study 3: Collectivism and Susceptibility to Group Influences

Collectivism involves "a susceptibility to the social influence of ingroup members" (Hui & Triandis, 1986). Collectivism's entails a greater concern with appearance and self presentation as represented by the face-saving rituals of some Eastern countries than with the opportunity to express one's own true feelings (Hui & Triandis, 1986). Oyserman (1993) describes the collective emphasis of maintaining social norms and sharing beliefs and feelings with their ingroup. Markus and Kitayama (1991) suggest that an interdependent construal of self is associated with the belief that behaviors are

affected to a great extent by "others".

Factor analytic studies paint a similar picture. The norms & standards factor of ISCol portrays the collective tendency to go along with ingroup members and use ingroup members as a guide for behavior and moral judgements of right and wrong. Similarly, Triandis' (e.g., Triandis et al., 1986; Triandis, Leung, Villareal, & Clack, 1985; Triandis, McCusker, & Hui, 1990) interdependence and sociability factor is exemplified by giving less weight to personal desires than to the desires of your mother or father or someone else close to the self. In sum, with collectivism comes a reliance on the ingroup to determine which behaviors, values, and attitudes are appropriate.

This aspect of collectivism has implications for how susceptible group members are to social pressure from other ingroup members, with highly collective group members more likely to listen to and agree with the group than less collective members. To test this hypothesis, respondents completed ISCol in reference to their Hunter College student identity and then completed a questionnaire designed to measure susceptibility to pressure from ingroup and outgroup members. An interaction between group membership of communicator and respondent collectivism is predicted, such that membership of communicator (ingroup versus outgroup) should have little if any effect on the extent to which respondents who are not collective toward other students at their college agree with the arguments presented. Group membership of the communicator is expected to affect respondents who are collective toward other students at their college. Highly collective group members should be more susceptible to the influences of ingroup members than outgroup members.

An alternative hypothesis is that argument type rather than argument source affects agreement. Arguments emphasizing collective gains may be more effective on group members high as opposed to low in collectivism regardless of the argument's source. This prediction will be tested by systematically varying the extent to which the opinions presented reflect collective or individualistic outcomes. An interaction between collectivism of respondent and collectivism of argument is expected such that highly collective students agree with collective arguments more than individualistic arguments and more than less collective students.

Method

Overview of design

A between-within design is used to test the relationship between collectivism and susceptibility to persuasion. The two between variables are (a) subjects' level of collectivism toward a particular group membership and (b) the type of argument (collective versus individualistic) used to persuade respondents. The within subjects variable is the group membership of the communicator (ingroup versus outgroup). The dependent variable is agreement.

Subjects

One hundred and sixteen respondents from the Hunter College introductory psychology subject pool participated in this study for partial fulfillment of course requirements. Respondents' ages ranged from 16 to 43, with a mean age of 21. Sixty-eight percent of the sample are women and 32% male. Thirty-six percent of the sample is white, 16% Hispanic/Latino, 15% Asian-American, 12% African-American, and 3%

West Indian. Seventeen percent indicated that they were of some other ethnic background.

Measures

ISCol. ISCol was used to assess each respondent's collectivism toward their identity as a Hunter College student. Because all respondents completed the measure in reference to the same identity, the fill in the blank format was not used. Instead, respondents completed questionnaires in which the group "Hunter College student" had already been inserted to complete each statement. Agreement with items is assessed on a 7 point scale, where 1=disagree strongly and 7=agree strongly. High scores correspond to high collectivism. Overall scale reliability is excellent, Cronbach's $\underline{a}$ =.90, with subscales demonstrating moderate ($\underline{a}$ =.64) to high ($\underline{a}$ =.87) levels of internal consistency (see Table 13).

Susceptibility to persuasion. Agreement with the opinions of ingroup and outgroup members was taken as an index of susceptibility to group influence (see Appendix I). Questionnaires consisted of arguments in favor of eight proposed Hunter College policies, e.g., beepers should be banned from campus; public speaking should be a required course. In each questionnaire, arguments were attributed to one of two sources. Half of the opinions were attributed to 75% or more of surveyed Hunter College students (the ingroup). The other half were attributed to 75% or more of surveyed Hunter College alumni who graduated in or before 1977 (an outgroup). Attributing the opinions to a majority of the ingroup or outgroup makes the arguments normative rather than the opinion of a single unknown ingroup or outgroup member.

Steps were taken to ensure that results could not be attributed to item bias or order effects. First, attribution of opinion to source was counterbalanced such that each opinion was attributed to each source at roughly the same frequency. Second, source order was varied such that students' opinions were presented first in half the questionnaires and alumni opinions first in the other half of the questionnaires.

Finally, two versions of this questionnaire were created. In one version, arguments in support of the proposed policy emphasize collective benefits. In the other version, individualistic arguments are provided. For example, the collective argument for establishing public speaking as a required course is that it will make graduates more marketable thus increasing the reputation of Hunter College as a whole. The corresponding individualistic argument is that a public speaking class will make individual students more marketable, giving them a leg up in the business world.

Scale reliability for the 8 item scale with 115 respondents is low, $\underline{a} = .53$. The alphas achieved by deleting each item did not improve significantly over that of the entire scale, highest $\underline{a} = .53$. Consequently, all items are used for analyses.

Procedure

Respondents first completed ISCol in reference to their Hunter College student group membership. They were then randomly assigned to complete either the collective argument version or the individualistic argument version of the susceptibility to persuasion measure. Finally, respondents completed a brief (one page) demographics questionnaire.

Results

Regression analyses and analysis of variance (ANOVA) were used to test predictions about respondents' susceptibility to persuasive communications. Regression analyses were run on overall collectivism and ISCol subscale. In each analysis, collectivism, argument type, and the interaction between ISCol factor and argument type were predictor variables. The outcome variables differed in each of the three models. In the first two models, outcomes were agreement with outgroup and agreement with ingroup. In the third model, the difference between ingroup agreement and outgroup agreement was used as the outcome. Regression analyses produced results practically identical to those of the ANOVAs. For ease of interpretation, I will describe the ANOVA results.

For each factor of collectivism, a between-within analysis of variance (ANOVA) was conducted. Subject collectivism (above versus below the median) and argument type (collective versus individualistic) are between subjects variables. The within subjects variable is group membership of the communicator (ingroup versus outgroup). The dependent variable is agreement.

An interaction between respondent collectivism and group membership of the communicator was predicted. Group affiliation of the communicator should have little effect on students low in collectivism. Group affiliation of the communicator should affect collective students, with highly collective students more susceptible to the influences of ingroup members than outgroup members. An interaction between respondent collectivism and argument type is also predicted. Students high in

collectivism should be more susceptible to collective arguments than to individualistic arguments. Students low in collectivism should be equally susceptible to both types of arguments. As a general prediction, results are expected to be strongest for the norms and standards factor.

Respondent collectivism. Only two main effect relationship between ISCol and overall agreement even approached significance. ISCol factor 1, social identity, predicted agreement, $F(1,111) = 3.8$, $p = .06$. Respondents with a high sense of social identity based on being a Hunter College student ($M = 1.40$) were more likely to agree with the persuasive communications than respondents who did not identify so strongly as a Hunter College student ($M = .89$), regardless of the group status of the communicator or the type of argument used. A marginally significant relationship between ISCol factor 5, norms and standards, was also found, $F(1,111) = 3.2$, $p = .08$. Respondents who refer to other students when making important decisions, $M = 1.40$, tended to agree with the pro-policy arguments to a greater extent than respondents who do not use other students as a point of reference in decision making, $M = .92$. All other main effects involving overall ISCol or ISCol subscales were nonsignificant, all $p > .10$.

Collectivism x group affiliation of communicator. Group affiliation of the communicator did not significantly predict agreement in any of the models tested, all $p > .37$. Ingroup members, $M = 1.05$, were no more likely to persuade respondents than were outgroup members, $M = 1.22$. This finding is not problematic, as there is no reason to expect overall differences in the persuasiveness of ingroup and outgroup communicators.

It was predicted that collectivism would interact with group affiliation of the

communicator in explaining agreement scores. As can be seen in Table 14, this prediction was not supported, with the interaction reaching marginal significance for only one factor, comfort with the collective, $F(1,111) = 3.62$, $p = .06$. Respondents high in collectivism according to the comfort with the collective factor are not affected by the group affiliation of the communicator: they agree equally with ingroup, $M = 1.11$, and out group, $M = .90$, opinions, $t(59) = .70$, $p = .49$. Respondents low in comfort with the collective on the other hand, agree with the opinions of the outgroup, $M = 1.57$, more than with the opinions of the ingroup, $M = .97$, $t(54) = 2.00$, $p = .05$. The predicted interaction did not even approach significance for the overall scale, $p = .36$, or any of the other factors, all $p > .41$.

Respondent collectivism x argument type. The between subjects variable argument type did not significantly predict agreement in any of the models tested, all $p > .70$. In other words, collective arguments, $M = 1.07$, were neither more nor less convincing than individualistic arguments, $M = 1.20$. This result is encouraging. It would have been a potential confound if either set of arguments had been more convincing than the other.

The predicted interaction between argument type and collectivism score found little support, see Table 15. Only for one factor, comfort with the collective, was the interaction significant, $F(1,111) = 6.72$, $p < .01$. Post-hoc t-tests suggest that the respondents least likely to agree with the persuasive arguments were those high in comfort with the collective who received a collective argument, $M = 0.59$. The other three groups, respondents low in collectivism who received individualistic arguments, M

= .99, and who received collective arguments, M = 1.6, and respondents high in collectivism who received collective arguments, M = 1.39, agreed with the communicator equally, all p > .10.

Discussion

Null findings were prevalent in this study. Whether a collective argument or an individualistic argument was delivered had no affect on respondents' agreement. This is not a surprising finding, as the arguments were designed to be equally persuasive to a general audience. Argument type was expected to interact with respondent collectivism to predict agreement. This predicted interaction was only marginally significant for one collectivism factor, comfort with the collective. Contrary to prediction, though, respondents high in collectivism who received a collective argument were least likely to agree.

Nor did the group membership of the communicator affect agreement scores directly. This is a little surprising, as ingroup members should in general be more persuasive than outgroup members due to higher trustworthiness. One interaction involving this variable approached significance. Unfortunately, even for this one interpretable interaction, mean group differences were not in the predicted direction, with source of communication affecting respondents low in collectivism rather than those high in collectivism.

Attributing opinions to the majority of ingroup and outgroup members polled was supposed to establish the opinions as norms or standards of the group. It is possible, though, that this manipulation did not work. If it had, a significant main effect of group

status would be expected, with ingroup members being more persuasive than outgroup members in general. The lack of this main effect suggests that the manipulation of group status may have been faulty.

First, alumni may not be enough of an outgroup to demonstrate this effect. Respondents who are highly collective toward their student identity may extend their feeling of collectivism outward as far as previous students. It would have been interesting to measure respondents' level of collectivism toward the outgroup, in this case alumni, or to include a second outgroup such as college administration, the New York City School Board or state politicians. Predictions regarding the behavior of ingroup members to outgroup members may have more to do with the match in level of collectivism toward the two groups than it does with level of collectivism toward the ingroup alone.

Second, the choice of student as the ingroup may have been a poor one. Both the Deaux et al. (1995) multidimensional scaling study and the results of study 2 of this dissertation suggest that occupation and hobby groups are relatively low in collectivism. Thus, the difference between respondents high and low with regards to their student identity may have been minimal, restricted by the fact that, in general, students are low in collectivism. If students as a group are low in collectivism, the group may not have the ability to set norms and standards, even for relatively collective individuals. Unfortunately, none of the manipulation checks necessary to test these explanations were in place.

It may also be the case that my predictions were off due to issues involving levels

of analysis. It may be that the maintenance of norms is an aspect of the group's culture, not an issue of individual members' orientation. If this is the case, then pressure regarding norms and standard maintenance will be set by the group and apply relatively equally to all group members, regardless of their collective orientation to the group. If this is the case, then one would not expect differences between respondents high versus low in collectivism at all.

This brings forward an interesting question about the match between group collectivism and the individual's collective orientation. Is it a multiplicative relationship such that the group's level and the member's level interact? Or, does one dominate the other -- i.e., highly collective members will act a certain way regardless of the group's profile? Unfortunately, questions regarding the group's level of collectivism are not testable in the present study, as neither an adequate index of the group's collectivism nor any reference point against which to compare the group are available.

General Discussion

Together, these studies demonstrate that ISCol has more than adequate reliability. Estimates of internal consistency for overall ISCol and ISCol subscales are strong in all three studies. Similarly, strong test-retest estimates from Study 1 indicate ISCol's reliability over time. This does not mean that group collectivism is static and unchanging. Group collectivism is viewed as a malleable and changeable orientation toward group memberships which can vary over time as the result of maturational or life course changes or due to changes in the social context. Matsumoto, Tsutomu and Takeuchi (1996) have shown that the relative strength of collectivism towards one's peers

and family varies as a function of age. Students are more collective toward their peers than toward their family while working adults are more collective toward their family than toward their peers. Critical events or momentary shifts in the social environment may also affect orientations toward group memberships. For example, nationally based collectivism may be heightened during the Olympics and collectivism towards one's political group affiliation may strengthen during Presidential election years. The extent to which these and other factors affect group level collectivism has yet to be determined.

Studies 1 and 2 provide evidence of ISCol's construct validity. Both convergent and divergent validity are suggested by Study 1. As predicted, the relationship between ISCol and an existing measure of personality-based collectivism was statistically significant, indicating some overlap between the two scales, but not so strong as to suggest that the two scales measure the same construct. Subsequent exploratory and confirmatory factor analysis provide further evidence of divergent validity, each suggesting that ISCol and personality-based collectivism represent different constructs.

Construct validity was also demonstrated by showing that ISCol can and does vary meaningfully at the level of the group. In study 1, individual group members were taken as the unit of analysis. Results indicate that level of collectivism toward a particular ethnic or nationality group predicts future levels of collectivism toward that same ethnic or nationality group better than it predicts levels of collectivism toward a membership based on occupations or hobbies. Measures of collectivism that operate at the cultural or personality level cannot account for this finding. Both culturally-based and personality-based measures operate at a higher level of analysis and cannot be used to

capture group level variations.

Groups themselves rather than individual members were taken as the units of analysis in study 2. Results indicate that groups differ in terms of the mean amount of collectivism displayed by members and that these group differences relate to other group characteristics such as mean group pride and mean amount of group-related activity. Group differences in this study were similar to those found by Deaux et al. (1995), suggesting at least some overlap between insiders and outsiders' perceptions of group collectivism. In both this study and the Deaux et al. (1995) study, religious groups stood out in terms of collectivism. Occupation and hobby groups, on the other hand, were low in collectivism in both studies.

Evidence of predictive validity is more limited. In Study 1, concurrent validity was demonstrated with significant correlations between ISCol and three theoretically related constructs, ingroup evaluation, perceived similarity, and tendency to pay attention to ingroup members when making decisions. Thus, ISCol does predict similar group-level attitudes measured concurrently.

Predictive validity was not demonstrated. In the third study, group specific collectivism did not predict members' agreement with ingroup and outgroup norms. This lack of success is not only disappointing but problematic. The existence of group specific variations in collectivism is not sufficient to justify a group sensitive approach. Being sensitive to group-based variations in collectivism is not enough to make ISCol a useful scale. These differences in collectivism must be shown to predict relevant, theoretically derived outcomes. Further studies are needed to determine ISCol's ability to predict

group-related behavior. These studies must maintain balance among levels of analysis. Evidence clearly indicates that ISCol measures a collective orientation that is tied to a specific group membership. Given this, ISCol is appropriate for use in studies that also operate on this level.

Redefining ISCol and Group Level Collectivism

My understanding of collectivism and how it relates to social groups has evolved considerably over the course of these studies. Constructing and validating a scale forces you to be clear about what it is that you are trying to measure and then forces you to deal with the fact that you may not actually be measuring what you set out to. In this section, I will describe those points around which contradictions exist. I will identify areas in which my initial conceptualizations have evolved over the course of these studies.

Group Collectivism or Group-Sensitive Collectivism

The area most in need of clarification is the definition of what I have been referring to as group level collectivism. In my thinking prior to conducting these studies and, thus, in the impetus for these studies, I have been imprecise in my definition of group level. In the first and third studies, group collectivism is used to characterize the relationship between individual and their group memberships. This approach assumes that people can have different relationships with the different groups that they belong to, being collective toward some but not others.

Earlier in this manuscript I gave an example of a person who is both a triathlete and a fraternity member. I suggested that he might be highly collective with regard to one of these group memberships, his fraternity, and relatively less collective toward his other

group membership, triathletes. Here, collectivism is a group level variable because it describes an individual's orientation toward a specific group membership. This type to collectivism will be referred to as group-specific or group-sensitive collectivism.

In the second study, collectivism is defined as a characteristic of social groups themselves. This approach assumes that some groups foster collectivism more than others. Sports teams, fraternities and the Citadel, for example, may be relatively collective groups because they actively promote collective ideals such as team spirit, loyalty and adherence to group norms and status hierarchies. Other social groups and categories such as triathlete, librarian or Gold's Gym member may serve many important functions (Deaux, Reid, Mizrahi & Cotting, 1997) but not inspire such high levels of collectivism. In this case, collectivism is a group level variable because it refers to a structural characteristic of social groups. This type of collectivism will be referred to as group collectivism.

Though somewhat complimentary, these two approaches highlight the complexity of the group level approach. I suggest that both group-sensitive collectivism and group collectivism exist and that both are useful variables for predicting group-related outcomes. Group sensitive collectivism can help us understand differences in ingroup members' behavior. The fact that some members are more collective in their orientation toward the group than are other members could help explain why some are more likely than others to donate money to the group, to invest time and effort to achieve common group goals or to adhere to group norms and standards. Group collectivism, on the other hand, can help us understand differences in the group's behavior. The fact that some

groups are more collective than others may help explain why some groups are more likely than others to be socially and politically active or to present a united front in the face of adversity.

Given these two definitions of group level collectivism, we must next ask ourselves what it is exactly that ISCol measures. Does ISCol measure group-specific collectivism? Or, does it measure group collectivism? I suggest that ISCol is best suited to measure individuals' orientation toward their memberships (group-specific collectivism) and not so suited to the measurement of group differences in collectivism. To understand why, we must consider issues of level of measurement and generalizability.

Using ISCol to measure a group's collectivism is a two step process. First, individual members are surveyed to determine members' levels of collectivism. Then, group members' collectivism scores are averaged to get an overall collectivism score for the group itself. From a purely methodological perspective, this approach is problematic. In order to get an adequate estimate of group members' mean level of collectivism, it would be necessary to obtain a representative sample of group members. This may be easy or difficult. Small groups with easily identified boundaries may pose little difficulty. For example, surveying the entire population of a specific sports team may be relatively easy. Obtaining a representative sample of groups that are extremely large, such as women or African Americans, will be far more difficult. For groups with undefined or fuzzy boundaries such as feminists or pro-lifer, it may be virtually impossible to define the population not to mention select a representative sample.

Even if a representative sample were attainable, it may not be worth the effort. I would argue that this is a case of the whole being greater than the sum of its parts. A group's collectivism is not simply the average collectivism of its members. ISCol measures collectivism at the level of the individual. Questions are administered to individual group members and concern individuals' behavioral, emotional, and attitudinal orientation toward the larger group. This is qualitatively different than measuring the extent to which a group is structured so as to support and promote collective ideals.

A true measure of group collectivism should take the group rather than the group member as the focus of inquiry. ISCol does not do this. Measurement at this level may require non-traditional methods and techniques, such as those developed by some students of social representation in which culturally shared images and meaning are used to converge upon a socially shared representations of the target, in this case, a particular social group.

Groups or Identities

ISCol was developed to measure and indeed named after identity specific collectivism. On the other hand, all of the definitions and discussions of the construct provided thus far involve groups and group memberships rather than identities. Though the stated purpose and my treatment of the construct may seem contradictory, I suggest that they are in fact complimentary. Tajfel (1978) suggests that people identify with their membership groups in order to increase their self-esteem. More recently, researchers have questioned whether people might identify with groups for reasons other than the maintenance of self-esteem (e.g., Brewer, 1991; Deaux, Reid, Mizrahi &

Cotting, in press). These researchers suggest that other motives such as optimal distinctiveness or self-insight also motivate people to identify with a particular group.

Descriptions of the process of identification suffer from the same simplistic analysis that once characterized descriptions of the motivations for identification. Identification is painted as a single, unipolar dimension whereby individuals are either highly or not so highly identified with their group memberships. It is possible, though, that there are many different ways to identify with a group. Group-specific collectivism can be seen as just such a specific way of identifying with a group membership.

This suggests that people can identify with their groups in different ways. One person might identify strongly with a group membership, but not in a collective way. This person may consider a group membership to be a key component to his or her self, identifying themselves strongly as a group member, yet at the same time feel little to no sense of collectivism toward the group or other group members.

A collective identification with a group, on the other hand, implies certain things about the way the individual sees him/herself as part of that group. It implies not only the physical identification of self a as group member and the cognitive identification of group member as part of the self. It also implies a level of attitudinal, emotional, and behavioral attachment to other group members. It is a description of how one places one's Self in the context of the group as well as how one places the group in the context of the Self.

From this perspective, there may be many ways of identifying oneself with a group. One might for example have differentiating identifications in which identification is based on the existence of an outgroup and the differentiation between the ingroup and

the outgroup. Examples of this type of identification might include the KKK or skinheads. In these examples, identification may not depend so much on how members feel about each other as how they feel about a specific outgroup.

Components of Group-Specific Collectivism

Finally, we have seen that the Comfort with the Collective factor does not perform the same way as the other ISCol factors. The subscale has adequate internal consistency, with alphas ranging from .79 to .82 over the three studies, and thus appears to measure a single construct. It has a relatively low test-retest reliability, though, with a coefficient of only 0.53. Two possibilities exist. First, Comfort with the Collective may not be as stable over time as the other subscales. It is possible, for example, that Comfort is more variable than the other, more stable characteristics of a person's relationship to their group membership. Second, it is possible that Comfort with the Collective is in fact a relatively stable characteristic of a person's relationship to their group but that ISCol does not pick up on this stability. Further studies are needed to determine the cause of Comfort's low test-retest reliability scores.

Comfort with the Collective is further complicated by the fact that (a) test-retest estimates based on the same versus a different group membership were virtually indistinguishable and (b) the relationship between comfort with the collective and the three group level measures attention, similarity and evaluation did not differ when the same group versus a different group was considered. This suggests that unlike the other subscales Comfort with the Collective is less group specific and more of a general orientation toward group memberships.

We can find further evidence of the fact that Comfort with the Collective is a more general, less group specific disposition. In the exploratory factor analysis of ISCol and Triandis subscales, Comfort did not load with the other ISCol subscales but split off to form a third factor with Triandis' personality-based vertical individualism. In the confirmatory factor analysis, the factor loading associated with Comfort was relatively low, suggesting lack of fit between it and overall group sensitive collectivism. Finally, in study 2, groups differences were found for all ISCol subscales except Comfort with the Collective. None of the groups differed when compared on this factor. Though a few differences were found when group-clusters rather than the separate groups themselves were considered, the relative lack of variability speaks volumes about the generality of this factor.

Upon reflection, Comfort's relative low temporal stability and inability to discriminate between social groups may not be surprising. Most if not all of the social groups included in this study are extremely large; so large, in fact, that it would be impossible to know or even meet all other ingroup members. Given this, the extent to which any one member feels comfortable or socially at ease with other members may depend to a large extent on other factors such as recent experience and personality disposition.

A member's comfort within the context of a group with an extremely large membership may vary dramatically depending on which other members they most recently associated with. One might be very comfortable among some other members yet extremely uncomfortable among others. This might account for fluctuations on Comfort

scores over time.

Social comfort in group specific contexts may also depend on the extent to which one is socially at ease in general. In other words, it may depend to some extent on one's personality. Comfort in social situations may dominate and make group specific effects look small in comparison. People who are comfortable in social situations may be comfortable no matter which group membership is considered. People who are not socially confident or comfortable may never be so, regardless of the specific group under consideration.

An alternative explanation rests on the fact that Comfort with the Collective is the only subscale in which every item is negatively worded. It is possible that responses to this subscale are heavily influenced by theoretically irrelevant constructs such as social desirability, negative affect, and depression. Comfort's outstanding generality may be accounted for by the fact that responses are affected by psychological dimensions such as these.

Further studies are needed to identify the source of Comfort's generality. First, a positively worded version of the Comfort subscale should be created. This version would contain items similar to the original subscale, but worded in such a way that agreement indicates collectivism. For example, the item "I do not fit in well with other ___s" would become "I fit in well with other ___s". Then, both the negatively and positively worded versions of ISCol should be administered to respondents along with questions regarding respondents' most recent experience interacting with members of the group as well as measures of social comfort (e.g., extroversion, sociability), social desirability, and

negative affect. Correlational and factor analytic approaches would then be used to determine whether responses to Comfort are affected by any of these psychological dimensions.

Individual Differences in Collectivism.

It has been assumed from the start that traditional approaches to collectivism are legitimate and meaningful. Indeed, the group-level approach has been presented as a supplement to the other levels rather than as a challenge to them. Some of the findings presented in this manuscript, though, suggest otherwise.

Specifically, findings that support the existence of a group-sensitive collectivism at the same time call into question our ability to talk meaningfully about individual differences in collectivism devoid from considerations of the group. If, as suggested, a person's level of collectivism depends on the specific group under consideration, does it make sense to classify them as individualistic or collective?

It is possible for collectivism to operate at the personality-level and the group-level at the same time. Individuals may have a general tendency toward individualism or collectivism which is at the same time moderated by specific group contexts (a main effect of person and a person by situation interaction). It is also possible that what appear to be individual differences in collectivism are merely artifacts of the person by group effect and are thus difficult to interpret in any meaningful way. The extent to which group-sensitive collectivism undercuts individual-differences in collectivism has yet to be determined.

Implications and Directions for Future Research

The group-level approach outlined in this manuscript opens up a whole new level at which to study collectivism. First, it is necessary to determine the extent to which effects demonstrated at the cultural and personality level hold at the group level of analysis. For example, studies have shown that reward allocation behaviors are related to both cultural and personality collectivism. Collectivism is associated with reliance on equality rules of distribution and individualism with reliance on equity rules of distribution. It is possible that reward allocation styles also depend on the group membership context. One prediction might be that individuals distribute rewards more evenly to members of groups to which they are collectively oriented than to the members of groups to which they are less collectively oriented. Other arenas in which questions like this might be asked include perceived social support, attributional style, and conflict resolution strategies. Are the demonstrated relationships between collectivism and these factors limited to cultural and individual-differences?

In addition, working at the group level suggests several topic areas not previously connected to collectivism. Knowing that someone is in a group tells us very little. Some group members are politically active, proud, and/or prone to intergroup bias and even violence, while others are not. Group level collectivism may help us understand why these and other differences occur.

Group collectivism may be a useful construct in other arenas. For researchers interested in specific group identities, such as Jewish or Feminist identity, or types of group identity, such as ethnic or stigmatized identity, ISCol in particular and group-

sensitive collectivism in general may be invaluable precisely because it allows flexibility and precision in the definition of the target group. Industrial-organizational psychology may also benefit from ISCol. Employee satisfaction, on the job performance, and turnover may all be affected by employees level of collectivism toward their company, office, and/or colleagues.

Group-sensitive collectivism adds to the growing body of literature that takes the group as the unit of analysis. Researchers interested in social identity, collective self-esteem, and, more recently, group loyalty have paved the way for a group level approach. Group-sensitive collectivism adds an important component to this existing body of research.

Several directions for future research are suggested by these studies. First, it is imperative that the process of validating ISCol be continued. The next step in this process should be a series of small scale predictive validity studies. These studies should be designed simply to determine whether ISCol predicts theoretically derived outcomes, rather than attempt to answer more conceptually grounded questions. For exampie, ISCol should predict group-specific volunteer behavior, willingness to donate money, and sensitivity to insult by outgroup members. If and when base predictive validity has been established, more conceptually rich and theoretically meaningful studies can be pursued.

Second, a more thorough consideration of how to measure group collectivism without going through the individual is called for. In order to bypass individually based measures, such an approach may have to rely on archival and artifactual data. In order to determine whether a particular group is collective, one might combine information from a

variety of sources. As an example, take the Girl Scouts of America. One might do a content analysis of that group's pledges, rules, customs, traditions, songs, badges, etc. in order to determine whether the group itself is collective.

Finally, it may be interesting to explore the other ways in which members might identify with their groups. Collectivism is a start, but other orientations surely exist. A "differentiating orientation" has already been suggested as one alternative form of identification. Whether and which other ways of identifying exist remains a question to be answered.

Conclusions

Group specific collectivism makes a significant contribution to the existing literature on collectivism by redefining the group and its role. Definitions of the group offered by traditional approaches to collectivism can be highly simplistic. For example, Triandis et al. (1988) suggests that "in collectivist cultures, the individual has few in groups (often just one) and frequently everybody else is in the outgroup". In contrast, Triandis et al. (1988) suggests that in individualistic cultures "people define the ingroup as 'people like me in social class, race, beliefs, attitudes, and values'. That is a huge group. Most interpersonal behavior occurs within that huge group." This definition suggests a willingness to lump together multiple group memberships as "the ingroup". ISCol conceptualizes the group in a specific sense. It looks within the broad ingroup for differences between component groups.

When more complex definitions of group are offered they are almost without

exception limited to relationship groups. For example, the group is defined as family, friends, colleagues, and neighbors. Unfortunately, we are still left to wonder where social groups such as Mormon and triathlete fit into the scheme of collectivism.

The studies reported in this manuscript demonstrate that people can do have different amounts of collectivism toward their different group memberships and that ISCol is sensitive to these variations. Now that ISCol has been shown to have a firm psychometric standing, additional studies are needed. First, further studies are needed to complete the validation of ISCol. Though reliability and construct validity have been demonstrated, further studies are needed to demonstrate that ISCol can predict theoretically related behaviors.

Equally needed are studies designed to broaden the conceptual net of the group specific approach. The studies reported here clearly demonstrate that this is a potentially important level of inquiry. There remains a lack of theory and research conducted at this level. Future studies, whether on collectivism or some equally deserving subject, cannot continue to ignore this level of variation.

Footnotes

1. Some respondents completed html:ISCol more than once, in reference to a different identity. Demographic characteristics were used to identify and eliminate duplicate cases.

Table 1

Study 1: Overall Scale and Subscale Reliabilities for ISCol

Scale	Alpha
	(n = 295)
ISCol	.92
Social Identity	.86
Common Fate	.69
Comfort with the Collective	.79
Behavioral Involvement	.79
Norms and Standards	.82
Emotional Attachment	.82
Triandis	
Horizontal Collectivism	.70
Horizontal Individualism	.77
Vertical Collectivism	.67
Vertical Individualism	.76
Evaluation	.92
Similarity	.78
Attention	.87

Table 2

Study 1: Correlations Between ISCol and Triandis Subscales

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
(n = 277)												
1. Overall ISCol	--	.76**	.30**	.89**	.75**	.84**	.72**	.09	.18**	.13*	.15*	-.14*
2. Common Fate		--	.29**	.62**	.38**	.53**	.50**	.06	.17**	-.08	.15*	-.20**
3. Comfort w. Collective			--	.35**	.11	.15*	.32**	.10	.00	-.18**	.22**	-.03
4. Emotional Attachment				--	.58**	.68**	.64**	.18**	.22**	.09	.24**	-.08
5. Behavioral Involvement					--	.58**	.35**	-.05	.03	.17**	-.07	-.06
6. Norms and Standards						--	.43**	.04	.15*	.15*	.13*	-.20**
7. Social Identity							--	.16**	.16**	.15*	.17**	.00
8. Overall Triandis								--	.77**	.08	.77**	.59**
9. Vertical Collectivism									--	.10	.50**	.14*
10. Verical Individualism										--	-.09	.16**
11. Horizontal Collectivism											--	.13*
12. Horizontal Individualism												--

* $p < .05$ ** $p < .01$

Table 3

Study 1: Exploratory Factor Analysis of ISCol and Triandis Subscales

	Factor		
	I	II	III
Emotional Attachment	.873	.135	-.064
Norms & Standards	.842	-.050	.083
Behavioral Involvement	.780	-.198	.250
Common Fate	.711	.025	-.293
Social Identity	.705	.173	-.027
Horizontal Collectivism	.039	.802	-.272
Vertical Collectivism	.118	.781	.083
Horizontal Individualism	-.190	.503	.396
Vertical Individualism	.268	.077	.815
Comfort with the Collective	.262	.157	-.577

Table 4

Study 1: Fit Assessment of Confirmatory Factor Analysis Models[1]

		Model	
	Criteria[2]	Unrestrained	Restrained
Chi-square		75.35	169.75
d.f.		19	20
significance	$p > .05$	0 .00	0.00
CMIN/DF	< 5.00	***3.966***	8.487
root mean square error of approximation (RMSEA)	< 0.10	***0.105***	0.167
normed fit index (NFI)	> 0.90	***0.902***	0.779
Tucker-Lewis coefficient (TLI)	> 0.90	0.888	0.717
root mean square residual (RMR)	< 0.10 [3]	***0.079***	0.617
goodness of fit index (GFI)	> 0.90 [4]	***0.929***	0.875
adjusted goodness of fit index (AGFI)	> 0.80 [4]	***0.866***	0.776
Bollen's relative fit index (RFI)	> 0.90 [5]	0.856	0.691
Bollen's incremental fit index (IFI)	> 0.90 [6]	***0.925***	0.800
comparative fit index (CFI)	> 0.90 [7]	***0.924***	0.798
Hoelter's critical N	> 200	108	50

Note: Values in bold italics meet the criteria for "reasonable" fit.

1. Thanks to Chin, Salisbury and Gopal (1996) for the formatting of this table.
2. Unless otherwise noted, criteria for determining "reasonable" fit are from Arbuckle (1997).
3. Hu and Bentler (1995); 4. Joreskog and Sorbom (1989); 5. Bollen (1986); 6. Bollen (1989); 7. Bentler (1990)

Table 5

Study 1: Correlations Between ISCol at Times 1 and Time 2 for Respondents in the Same Group and Different Group Condition

	Condition		$r_{same} - r_{different}$
Subscale	Same[1]	Different	z
	(n = 61)	(n = 66)	
ISCol	.79**	.11	5.4**
Social Identity	.81**	.02	6.2**
Common Fate	.65**	.20	3.2**
Comfort with the Collective	.53**	.50**	0.2
Behavioral Involvement	.73**	-.13	5.8**
Norms and Standards	.76**	.36*	3.4**
Emotional Attachment	.75**	.17	4.3**

[1] Test-retest reliability coefficients.
* $p < .05$. ** $p < .001$.

Table 6

Study 1: Correlations Between ISCol and Attention, Evaluation and Similarity for Respondents in the Same Group and Different Group Condition

Scale	Condition: Same	Condition: Different	$r_{same} - r_{different}$: z
I. ATTENTION	(n = 132)	(n = 144)	
ISCol	.46**	.11	3.22***
Social Identity	.25*	.08	1.42†
Common Fate	.21*	.12	0.77
Comfort with the Collective	.10	-.02	0.92
Behavioral Involvement	.37**	.01	3.15***
Norms and Standards	.55**	.10	4.32***
Emotional Attachment	.39**	.19*	1.88*
II. EVALUATION	(n = 133)	(n = 142)	
ISCol	.43**	.09	3.18***
Social Identity	.44**	.11	3.02**
Common Fate	.34**	.10	2.03*
Comfort with the Collective	.22*	.07	1.33†
Behavioral Involvement	.09	-.05	1.17

Norms and Standards	.31**	.02	2.47**
Emotional Attachment	.45**	.18*	2.58**
III. SIMILARITY	(n = 133)	(n = 144)	
ISCol	.57**	.27**	3.09***
Social Identity	.45**	.16*	2.74**
Common Fate	.32**	.19*	1.18
Comfort with the Collective	.41**	.28**	1.24
Behavioral Involvement	.23*	.14	0.73
Norms and Standards	.44**	.13	2.85**
Emotional Attachment	.56**	.32**	2.47**

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .01$

Table 7

Study 2: Overall Scale and Subscale Reliabilities for html: ISCol

Scale	Alpha
	(n = 321)
ISCol	.92
Social Identity	.78
Common Fate	.76
Comfort with the Collective	.82
Behavioral Involvement	.84
Norms and Standards	.78
Emotional Attachment	.80

Table 8

Listserves, Newsgroups, On-line Psychology Sites and Search Engines That Referred at Least One Respondent to Html:iscol.

Listserves	
Dyke-net	22
Ellen Degeneres Mailing List	7
GGBB List	1
Sapho	1
Other Listserves	2
Total	*33*
Newsgroups	
alt.bsu.religion	4
alt.christian	1
alt.mens.rights	1
alt.religion	3
alt.religion.christian	1
alt.religion.christian.20something	3
alt.religion.christian.calvary-chapel	3
politics.rep	1
religion.boston.church	1
soc.feminism	23
soc.men	6
soc.women	1
soc.women.lesbian-and-bi	18
Other newsgroups	8
Total	*74*
Psychology Study Websites	
American Psychological Association	2
American Psychological Society	8
Index of Psychology Surveys	2
Psych Research On-Line	2
Other psychology study page	4
Total	*18*

Search Engines	
Geocities	34
Lycos	5
Yahoo	7
Other search engine	14
Total	*60*
Other	
Friend	8
Browsing	37
Microtec	1
MIE	1
NOW	1
Professor	1
Psychology Heute	1
Social psych class	1
Website	14
Total	*65*

Table 9

Study 2: Mean Differences in ISCol Factors Summing Across Groups and Clusters

Scale	Between Group		Between Cluster	
	Mean	SD	Mean	SD
	(n = 289)		(n = 361)	
Social Identity	5.97	0.94	5.92	0.96
Common Fate	4.27	1.17	4.25	1.14
Comfort with the Collective	5.15	1.22	5.20	1.17
Behavioral Involvement	4.19	1.28	4.16	1.27
Norms and Standards	3.43	1.13	3.40	1.13
Emotional Attachment	5.24	1.04	5.21	1.01

Table 10

Study 2: Mean Differences Between Groups in Overall Collectivism and Each ISCol Subfactor

Group	ISCol	ISCol Factor[1]					
		I	II	III	IV	V	VI
Woman (n=67)	4.69 (.74)	6.18 (.63)	4.08 (1.01)	5.14 (1.31)	4.20 (1.30)	3.31 (.96)	5.22 (.95)
Lesbian (n=43)	4.84 (.76)	6.12 (.78)	4.37 (1.01)	5.17 (1.11)	4.53 (1.11)	3.27 (1.20)	5.55 (1.02)
Man (n=27)	4.11 (.88)	5.59 (1.10)	3.48 (1.23)	4.76 (1.14)	3.14 (1.19)	3.19 (1.18)	4.48 (1.19)
Feminist (n=14)	5.11 (.67)	6.36 (.69)	4.90 (1.00)	5.02 (1.03)	5.15 (.86)	3.72 (1.06)	5.50 (.85)
Bisexual (n=23)	4.04 (.73)	5.19 (1.16)	3.65 (1.00)	4.71 (1.05)	3.45 (1.16)	2.72 (.82)	4.54 (.91)
Gay (n=27)	4.36 (.83)	5.40 (1.09)	3.84 (1.07)	4.61 (1.26)	4.12 (1.10)	3.30 (1.25)	4.86 (1.00)
Black (n=15)	5.17 (.66)	6.37 (.42)	5.30 (1.22)	5.53 (1.43)	5.06 (1.12)	2.96 (.80)	5.73 (.64)
Christian (n=26)	5.36 (.55)	6.51 (.61)	5.28 (.96)	5.69 (1.03)	4.66 (1.05)	4.10 (1.10)	5.94 (.59)

1. I = Social Identity; II = Common Fate; III = Comfort with the Collective; IV = Behavioral Involvement; V = Norms and Standards; VI = Emotional Attachment.

Table 11

Groups Associated with Each Cluster

	n	%
Religion Cluster:		
Catholic	12	21.1
Christian	26	45.6
Jewish	12	21.1
Wiccan	7	12.3
Total	*57*	*100.0*
Political Cluster:		
Feminist	14	56.0
Republican	6	24.0
Socialist	2	8.0
Democrat	3	12.0
Total	*25*	*100.0*
Sexual Orientation Cluster:		
Lesbian	43	43.0
Bisexual	23	23.0
Gay	27	27.0
Queer	5	5.0
Heterosexual	2	2.0
Total	*100*	*100.0*
Gender Cluster:		
Woman	67	65.7
Man	27	26.5
Transgendered	8	7.8
Total	*102*	*100.0*
Ethnicity & Nationality Cluster:		
African-American	12	26.1
Asian-American	9	19.6
Black	3	6.5
Canadian	3	6.5
Caucasian	7	15.2
Hispanic/Latino	2	4.3
Chinese	3	6.5
American	3	6.5
Australian	4	8.7
Total	*46*	*100.0*

Occupation & Hobby Cluster		
Computer programmer	6	20.7
Musician	2	6.9
Professional	4	13.8
Student	8	27.6
Graphic artist	1	3.4
Psychologist	3	10.3
Professor	1	3.4
Musician	1	3.4
Web designer	1	3.4
Athlete	1	3.4
College Professor	1	3.4
Total	*29*	*100.0*

Table 12

Study 2: Mean Differences Between Clusters in Overall Collectivism and Each ISCol Subfactor

Cluster	Overall ISCol	ISCol Factors[1] I	II	III	IV	V	VI
Religion (n=57)	5.20 (.64)	6.35 (.81)	4.99 (.99)	5.66 (1.01)	4.31 (1.17)	4.11 (1.09)	5.78 (.79)
Political (n=25)	5.09 (.56)	6.17 (.68)	4.68 (.96)	5.47 (.97)	4.89 (.84)	3.89 (.97)	5.44 (.78)
Sexual Orientation (n=100)	4.53 (.83)	5.71 (1.04)	4.07 (1.09)	4.92 (1.13)	4.18 (1.19)	3.15 (1.13)	5.14 (1.05)
Gender (n=102)	4.48 (.82)	5.95 (.87)	3.92 (1.09)	4.95 (1.28)	3.84 (1.33)	3.24 (1.01)	4.96 (1.06)
Ethnicity & Nationality (n= 46)	4.88 (.78)	5.98 (.85)	4.59 (1.20)	5.67 (1.06)	4.61 (1.26)	3.17 (1.06)	5.26 (.87)
Occupations & Hobbies (n=29)	4.44 (.88)	5.46 (1.18)	3.69 (.96)	5.28 (1.04)	3.71 (1.32)	3.51 (1.15)	4.99 (1.08)

1. I = Social Identity; II = Common Fate; III = Comfort with the Collective; IV = Behavioral Involvement; V = Norms and Standards; VI = Emotional Attachment.

Table 13

Study 3: Overall Scale and Subscale Reliabilities for ISCol

Scale	Alpha
	(n = 115)
ISCol	.90
Social Identity	.87
Common Fate	.64
Comfort with the Collective	.82
Behavioral Involvement	.66
Norms and Standards	.71
Emotional Attachment	.78

Table 14

Study 3: Analysis of Variance For Susceptibility to Ingroup Versus Outgroup Opinions: Test of Predicted Interaction Between Collectivism of Respondent and Group Membership of Communicator

Scale	MS_E	$F(1,111)$	p
ISCol	2.37	0.85	.36
Social Identity	1.94	0.70	.41
Common Fate	0.01	0.00	.99
Comfort with the Collective	9.84	3.62	.06†
Behavioral Involvement	1.19	0.42	.52
Norms and Standards	0.29	0.10	.75
Emotional Attachment	0.92	0.33	.57

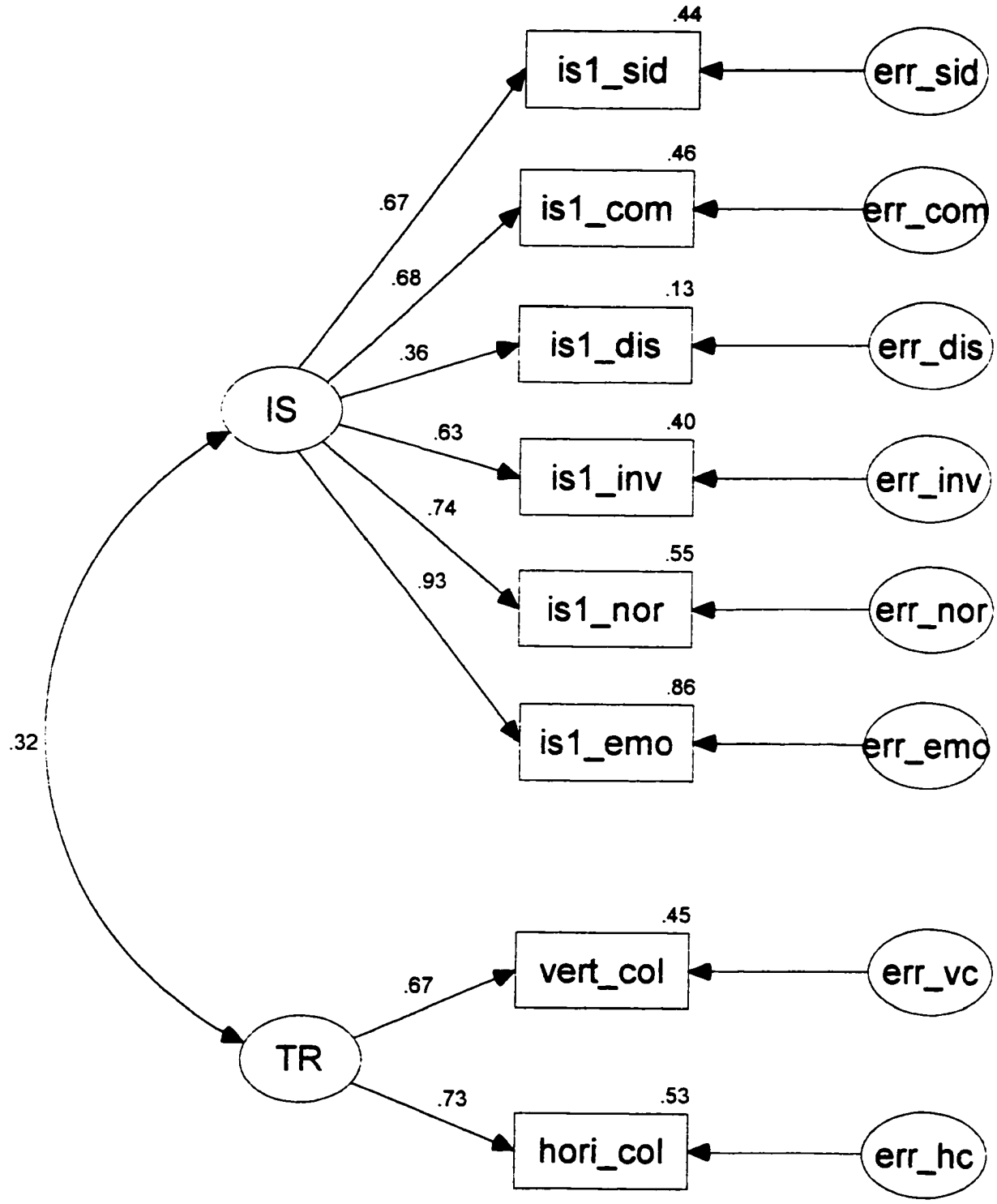
†Marginal significance

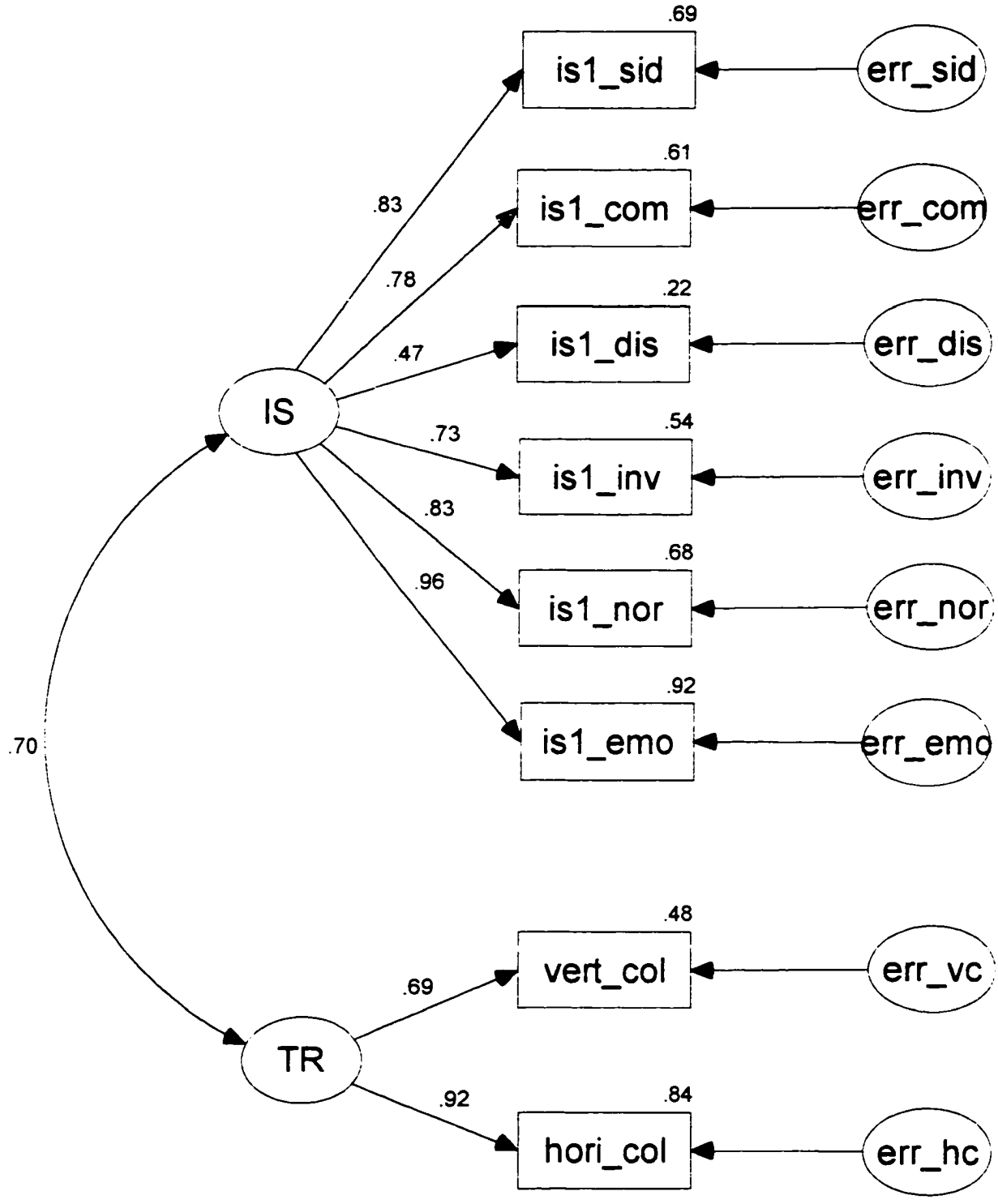
Table 15

Study 3: Analysis of Variance For Susceptibility to Ingroup Versus Outgroup Opinions: Test of Predicted Interaction Between Collectivism of Respondent and Collectivism of Argument

Scale	MS_E	$F(1,111)$	p
ISCol	0.23	0.05	.83
Social Identity	0.01	0.00	.97
Common Fate	0.01	0.01	.90
Comfort with the Collective	29.5	6.72	.01*
Behavioral Involvement	0.01	0.00	.96
Norms and Standards	3.62	0.80	.37
Emotional Attachment	0.85	1.86	.18

*$p < .05$





http://www.geocities.com/CollegePark/Quad/6098/index_1.html

Identify Yourself!

Collective Identification Scale

Overview

You belong to a variety of social groups and categories. For example, you can identify yourself in terms of your ethnicity or race (e.g., Hispanic, Caucasian), your gender (e.g., man, woman), your occupation (e.g., lawyer, student), your religion (e.g., Jewish, Catholic), or your sexual orientation (e.g., heterosexual, lesbian).

In this survey you will answer some questions about one "identity" that is important to your sense of who you are. You may complete the survey in reference to any one of the many identities that are important to your sense of self.

Pick an Identity

Below you will find lists of some common group memberships from which to choose. If none of the identities is meaningful to you, choose the "Other" option for the identity category you would like to answer the survey in reference to. For example, if you want to complete the survey in reference to your religion but your religion is not listed, simply choose "Other Religion".

Identities

	Race, Ethnicity and		Occupations and
Gender	Nationality	Religion	Hobbies
Man	African-American	Catholic	Athlete
Woman	American	Christian	College Professor
Transgendered	Asian-American	Jewish	Computer Programmer
Other gender	Australian	Mormon	Graphic Artist
	Black	Other Religion	Musician
Sexual Orientation	Canadian		Office Worker
Heterosexual	Caucasian	Political Affiliation	Professional
Lesbian	Chinese	Democrat	Psychologist
Gay	Hispanic/Latino(a)	Feminist	Student
Bisexual	Jamaican	Republican	Web Designer
Queer	European	Socialist	Other Occupation
Other Sexual Orientation	Other Ethnicity/Nationality	Other Political Affiliation	Other Hobby

Thanks!

Appendix A

Sample item from Hui's (1988) INDCOL.

Spouse

S2. A marriage becomes a model for us when the husband loves what the wife loves, and hates what the wife hates.

S4. If one is interested in a job about which the spouse is not very enthusiastic, one should apply for it anyway. (reverse)

Parent

P3. When making important decisions, I seldom consider the positive and negative effects my decision will have on my father. (reverse)

P4. Teenagers should listen to their parents advice on dating.

Kin

K1. I would help, within my means, if a relative told me that he/she is in financial difficulty.

K4. I would not let my cousin use my car (if I have one). (reverse)

Neighbor

N4. I am not interested in knowing what my neighbors are really like. (reverse)

N10. I feel uneasy when my neighbors do not greet me when we come across each other.

Friend

F3. I like to live close to my good friends.

F5. I would pay absolutely no attention to my close friends' views when deciding what kind of work to do. (reverse)

Co-worker

C2. When I am among my classmates, I do my own thing without minding about them. (reverse)

C8. Classmates' assistance is indispensable to getting a good grade at school.

Appendix B

Identity Specific Collectivism (ISCol) scale.

I. Social Identity

1. Being a __ is central to who I am.
2. Being a __ is an important reflection of who I am.
3. I identify myself as a __.
4. I would be proud to be identified as a __.
5. I am glad to be a __.
6. Being a __ gives me a sense of who I am.

II. Common Fate

1. My own personal success is more important than the success of __s as a whole.
2. The success of __s as a group is more important than my own personal success.
3. If other __s are slowing me down, it is better just to work alone.
4. When a __ is successful, it does not really make me look better.
5. I have a sense of duty to __s.
6. When __s do well, I feel good.

III. Discomfort with the Collective

1. I do no fit in well with other __s.
2. When I'm with other __s I feel like an outsider.
3. I feel uneasy with other __s.
4. As a __, I feel isolated.
5. Working with other __s is usually more trouble than it's worth.
6. Even though I'm a __, I do not feel particularly connected to other __s.

IV. Behavioral Involvement

1. I prefer to spend my free time with other __s.
2. I generally like __s more than people who are not __s.
3. My most rewarding friendships are with other __s.
4. I am more likely to help a __ than I am to help someone who is not a __.
5. It is more important that I establish good relationships with __s than with people who are not __s.
6. I like to live close to other __s.

V. Norms & Standards

1. In general, it is important to go along with what other __s want.
2. __s stick together.
3. I look to other __s to determine what is right and wrong.
4. __s have a set of standards that I feel I must live by.
5. I look to other __s to determine how to behave.
6. I tend to share the same opinions as other __s.

VI. Emotional Attachment

1. I try to make myself available to help other __s.
2. I feel strong ties to __s.
3. It is important that I bond with other __s.
4. I like meeting new __s.
5. Praise from another __ is especially meaningful.
6. I feel a common bond with other __s.

Appendix C

Triandis' (1996) Measure of Individualism-Collectivism

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree

1. My happiness depends very much on the happiness of those around me.
2. Winning is everything.
3. I usually sacrifice my self-interest for the benefit of my group.
4. It annoys me when other people perform better than I do.
5. It is important for me to maintain harmony within my group.
6. It is important to me that I do my job better than others.
7. I like sharing little things with my neighbors.
8. I enjoy working in situations involving competition.
9. The well-being of my co-workers is important to me.
10. I often do "my own thing".
11. If a relative were in financial difficulty, I would help within my means.
12. Competition is the law of nature.
13. If a co-worker gets a prize I would feel proud.
14. Being a unique individual is important to me.
15. To me, pleasure is spending time with others.
16. When another person does better than I do, I get tense and aroused.
17. Children should be taught to place duty before pleasure.
18. Without competition it is not possible to have a good society.
19. I feel good when I cooperate with others.
20. Some people emphasize winning; I am not one of them.
21. It is important to me that I respect decisions made by my groups.
22. I'd rather depend on myself than on others.
23. Family members should stick together, no matter what sacrifices are required.
24. I rely on myself most of the time; I rarely rely on others.
25. Parents and children must stay together, as much as possible.
26. My personal identity independent from others is very important to me.
27. It is my duty to take care of my family, even when I have to sacrifice what I want.
28. My personal identity is very important to me.
29. I am a unique person, separate from others.
30. I respect the majority's wishes in groups of which I am a member.
31. I enjoy being unique and different from others.
32. It is important to consult close friends and get their ideas before making a decision.

THANK YOU VERY MUCH FOR YOUR HELP.

Appendix D

Evaluation

INSTRUCTIONS: Please circle the number that best describes _____s. For example, circle the number 1 for the first item if you think _____s are Very Ambitious. Circle the number 5 if you think _____s are Very Unambitious. If you think ____s are somewhere in between Very Ambitious and Very Unambitious, circle the number between 1 and 5 that best represents how ambitious you think _____s are (2=somewhat ambitious; 3=neither ambitious nor unambitious; 4=somewhat unambitious).

Ambitious	1-----2-----3-----4-----5	Unambitious
Compassionate	1-----2-----3-----4-----5	Not compassionate
Competent	1-----2-----3-----4-----5	Incompetent
Confident	1-----2-----3-----4-----5	Non-confident
Considerate	1-----2-----3-----4-----5	Inconsiderate
Creative	1-----2-----3-----4-----5	Non-creative
Efficient	1-----2-----3-----4-----5	Inefficient
Energetic	1-----2-----3-----4-----5	Un-energetic
Friendly	1-----2-----3-----4-----5	Unfriendly
Generous	1-----2-----3-----4-----5	Not generous
Likeable	1-----2-----3-----4-----5	Not likeable
Practical	1-----2-----3-----4-----5	Impractical
Sincere	1-----2-----3-----4-----5	Insincere
Sympathetic	1-----2-----3-----4-----5	Unsympathetic
Warm	1-----2-----3-----4-----5	Not warm
Wise	1-----2-----3-----4-----5	Unwise

Appendix E

Similarity

INSTRUCTIONS: Please rate how similar you are to other ____s. In the space provided in the left hand margin, simply write the number between 1 (totally dissimilar) and 7 (totally similar) that best describes how similar you are to other ____s in the following areas.

1---------2---------3---------4---------5---------6---------7

Totally Dissimilar **Dissimilar** **Slightly Dissimilar** **Neutral** **Slightly Similar** **Similar** **Totally Similar**

FIRST, please tell us in general terms how similar you are to other _____s.

_____ 1. In general, how similar are you to other _____s?

NOW, please tell us how similar you are to other _____s in the following areas. How similar are you to other ___s in terms of:

_____ 2. What you think is best for your group?

_____ 3. What you like and dislike about being a group member?

_____ 4. Your opinions about what it means to be a "good" group member?

_____ 5. Your beliefs about what goals group members should be working toward?

_____ 6. How you act when you are around other group members?

_____ 7. Your personality?

Appendix F

Attention

INSTRUCTIONS: In the space provided in the left hand margin, please write the number between 0 (I never pay attention) and 4 (I always attention) that best answers each of the following questions about how much attention you pay to the views of other _____s when making personal decisions.

0 = I never pay attention
1 = I occasionally pay attention
2 = I pay attention about half of the time
3 = I pay attention most of the time
4 = I always pay attention

FIRST, please tell us in general terms how much attention you pay to the views of other _____s when making personal decisions.

_____ 1. In general, how much attention do you pay to the views of ____s when making a personal decision?

NOW, please tell us how much attention you pay to the views of other _____s in the following areas:

_____ 2. When choosing an intimate friend, such as a boyfriend, girlfriend or spouse?

_____ 3. When deciding on what kind of work to do?

_____ 4. When deciding what kind of education to pursue?

_____ 5. When deciding who to vote for in political elections?

_____ 6. When deciding the difference between what is right and what is wrong?

Appendix G

Race/Ethnicity Instructions

People can define or describe themselves in a number of different ways. One of the ways in which people define themselves is by the social groups or categories to which they belong. So, for example, people might describe themselves in terms of their ethnicity (e.g, Hispanic), their gender (e.g., woman), their occupation (e.g., lawyer or student), and their religion (e.g., Catholic). We would like you to answer some questions about a category or "identity" that you feel is important to your sense of who you are. Please choose **ONE** identity from the following list of ethnic, religious, and nationality groups that is an important part of who you are. If none of the identities listed below apply to you, please choose an ethnic, religious, or nationality group that does.

African-American	Hispanic/Latino	Korean-American
American	Italian-American	Midwesterner
Catholic	Jamaican	Muslim
Chinese-American	Japanese-American	New Yorker
Christian	Jewish	Polish-American

IMPORTANT: Write the ethnicity, religion, or nationality you chose here: _____

We would now like you to tell us some things about the identity that you have chosen. On the following pages you will find a series of questions. All of these questions involve statements in a form similar to the one below:

_____ **I enjoy being with other _____s.**

To make these statements complete, simply substitute the identity that you wrote down above for the blank space in each of the sentences. (You do not have to actually write the identity down. Simply think about that identity when you think about each statement.) For example, let us assume that the identity that you have chosen is "Jewish". The statement would now read:

_____ **I enjoy being with other Jews.**

Your task is to indicate the extent to which you agree or disagree with each of the statements. If you strongly disagree with the statement, write 1 in the space provided to the left of the statement. If you strongly agree with the statement, write 7 in the space provided to the left of the statement. If you slightly agree with the statement write 5 next to the statement, and so forth.

Appendix H

Sample Page of Coding for html:ISCol

```
<html> <head><title>ISCol</title>
</head>
<body BGCOLOR=ANTIQUEWHITE>
<h2 ALIGN=CENTER>Identity Specific Collectivism - ISCol</h2>
<STRONG>
<P>We would now like you to tell us some things about the identity that
you have chosen.  To complete this survey, simply click on the response
option that best represents your level of agreement or disagreement with
each of the following statements.
<p>This survey was designed for use with a variety of groups.  You may
find
that some items are more applicable to being a man than others.  Please
try to
answer all questions to the best of your ability.</P>
<form method=post action="/cgi-bin/homestead/mail.pl?iscol">
<BR><BR>
<P>1. Being a __ is central to who I am.
<P><INPUT TYPE="radio" NAME="01IS" VALUE="1" >Strongly Disagree
<INPUT TYPE="radio" NAME="01IS" VALUE="2" >Disgree
<INPUT TYPE="radio" NAME="01IS" VALUE="3" >Slightly Disagree
<INPUT TYPE="radio" NAME="01IS" VALUE="4" >Neutral
<INPUT TYPE="radio" NAME="01IS" VALUE="5" >Slightly Agree
<INPUT TYPE="radio" NAME="01IS" VALUE="6" >Agree
<INPUT TYPE="radio" NAME="01IS" VALUE="7" >Strongly Agree
</P><BR>
<P>2. My own personal success is more important than the success of __s
as a whole.
<P><INPUT TYPE="radio" NAME="02IS" VALUE="1" >Strongly Disagree
<INPUT TYPE="radio" NAME="02IS" VALUE="2" >Disgree
<INPUT TYPE="radio" NAME="02IS" VALUE="3" >Slightly Disagree
<INPUT TYPE="radio" NAME="02IS" VALUE="4" >Neutral
<INPUT TYPE="radio" NAME="02IS" VALUE="5" >Slightly Agree
<INPUT TYPE="radio" NAME="02IS" VALUE="6" >Agree
<INPUT TYPE="radio" NAME="02IS" VALUE="7" >Strongly Agree
</P><BR>
<P>3. I do not fit in well with other  __s.
<P><INPUT TYPE="radio" NAME="03IS" VALUE="1" >Strongly Disagree
<INPUT TYPE="radio" NAME="03IS" VALUE="2" >Disgree
<INPUT TYPE="radio" NAME="03IS" VALUE="3" >Slightly Disagree
<INPUT TYPE="radio" NAME="03IS" VALUE="4" >Neutral
<INPUT TYPE="radio" NAME="03IS" VALUE="5" >Slightly Agree
<INPUT TYPE="radio" NAME="03IS" VALUE="6" >Agree
<INPUT TYPE="radio" NAME="03IS" VALUE="7" >Strongly Agree
</P><BR>
</STRONG>
</BODY>
</HTML>
```

Appendix I

Persuasion Questionnaire: Collective Argument Version

In 1997, Hunter College carried out an extensive research project in which currently enrolled Hunter students and Hunter Alumni were asked to evaluate a set of issues and policies relevant to The College. Some of the results of this survey are presented below. The first items detail the opinions of currently enrolled Hunter students. These four items were selected because the vast majority of students surveyed were in agreement as to whether the policy is a good or bad idea. Specifically, **75% or more** of the Hunter College students surveyed shared the same opinion on each of these four issues.

Please read the following statements carefully. Then, using the scale provided, rate the extent to which you agree or disagree with the opinions of other Hunter College students. If you disagree completely with the opinions of other Hunter College students write **-5** in the space provided. If you agree completely, write **+5.** If you are neutral (you neither agree nor disagree), write **0**. If you disagree but not completely, choose a number between **-1** and **-4** that best represents your level of disagreement. If you agree but not completely, choose a number between **+1** and **+4** that best represents your level of agreement.

-5.....-4.....-3.....-2.....-1.....0.....+1.....+2.....+3.....+4.....+5

Disagree Completely	Disagree	Neutral	Agree	Agree Completely

_____ 1. Most Hunter College students agree that public speaking should be a required course at Hunter. Though most are scared of taking a public speaking class, popular opinion is that its inclusion in the curriculum will make Hunter graduates more competitive in today's job market thus improving the reputation of Hunter College as a whole.

_____ 2. Most Hunter College students agree that everyone should be required to wear their ID badge on campus for security purposes. Though the badges are not very attractive, popular opinion is that the requirement will make the campus safer for the Hunter community, allowing its members to feel comfortable and secure.

_____ 3. Most Hunter College students agree that the student fee should be increased by $5.00 a year to provide additional funding for student resources and activities. Though money is scarce for students, popular opinion is that $5.00 is small amount to pay for the additional services the money will provide for the student community.

_____ 4. Most Hunter College students agree that anyone caught making noise or bringing food and drink into the library should be removed from the library and have their food confiscated. Though recognizing that this rule is somewhat intrusive and harsh, popular opinion is that its enforcement is good for Hunter College as a whole because it will make the library a quieter and cleaner place to study.

These next items detail the opinions of Hunter alumni who graduated before 1977. These four items were selected because the vast majority of alumni surveyed were in agreement as to whether the policy is a good or bad idea. Specifically, **75% or more** of the Hunter College alumni surveyed shared the same opinion on each of these four issues.

Please read the following statements carefully. Then, using the scale provided, rate the extent to which you agree or disagree with the opinions of Hunter College alumni. If you disagree completely with the opinions of Hunter College alumni write **-5** in the space provided. If you agree completely, write **+5.** If you are neutral (you neither agree nor disagree), write **0**. If you disagree but not completely, choose a number between **-1** and **-4** that best represents your level of disagreement. If you agree but not completely, choose a number between **+1** and **+4** that best represents your level of agreement.

-5.....-4.....-3.....-2.....-1.....0.....+1.....+2.....+3.....+4.....+5

Disagree Completely	Disagree	Neutral	Agree	Agree Completely

_____ 1. Most alumni agree that anyone caught cheating on assignments and exams should automatically receive a failing grade for the course, with additional punishment possible for repeat offenders. Though this punishment might seem harsh, popular opinion is that it will create a more honest and fair academic environment and is therefore for the good of the community as a whole.

_____ 2. Most alumni agree that anyone caught vandalizing public bathrooms and other campus property with racist, sexist, or otherwise "hateful" graffiti should receive harsh punishment, such as a monetary fine or suspension. Though respondents feel strongly about an individual's right to free speech, popular opinion is that most graffiti is unsightly and offensive and "hateful" graffiti is especially so because it hurts the Hunter community to have its members targeted and attacked.

_____ 3. Most alumni agree that due to the lack of adequate space at Hunter many of the rooms currently designated as student club offices should be used instead for classrooms - forcing clubs to share a smaller amount of space. Though those surveyed did not want students clubs to lose their offices, popular opinion is that the change will benefit the Hunter community as a whole by allowing a wider variety of courses and enabling more flexible scheduling of courses.

_____ 4. Most alumni agree that beepers and cells phones should be turned off when on campus. Though respondents like the new technology (and in fact many of the people surveyed own one or both of the items), popular opinion is that the Hunter community is put at a disadvantage every time a class or study period is interrupted by unnecessary noise and/or distraction.

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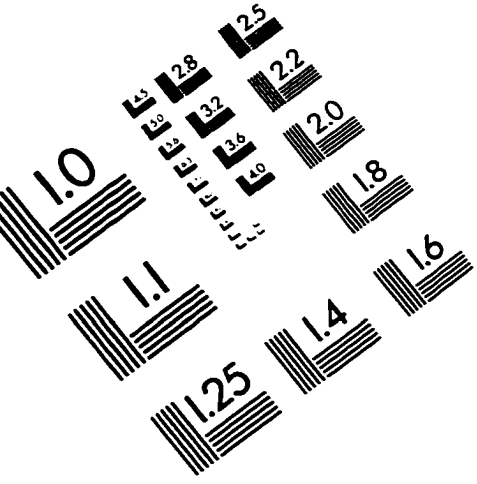
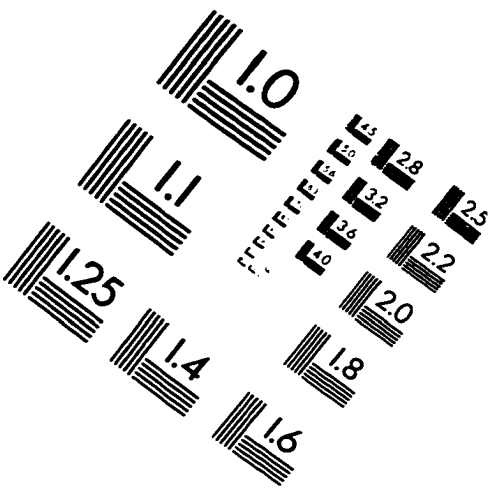
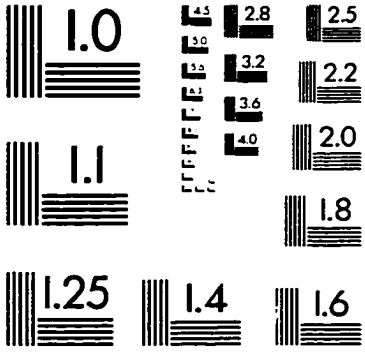
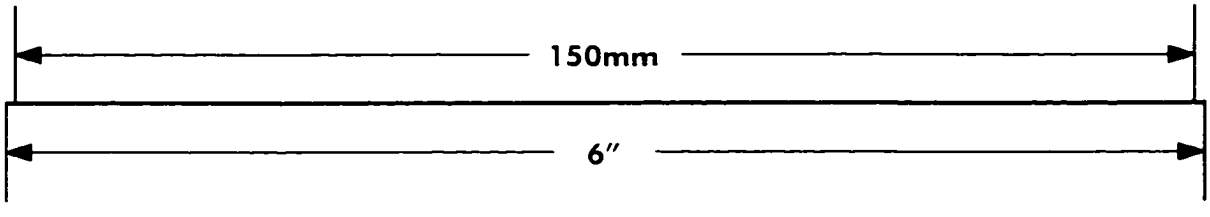
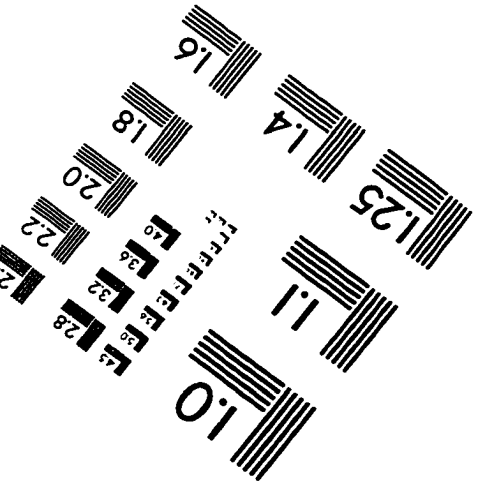
IMAGE EVALUATION
TEST TARGET (QA-3)

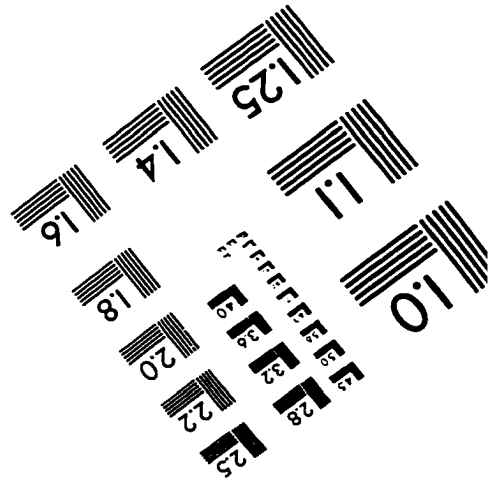












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