

Cornell University  
ILR School

Cornell University ILR School  
**DigitalCommons@ILR**

---

Faculty Publications - Organizational Behavior

Organizational Behavior

---

11-1-2005

## Individualism-Collectivism and Group Creativity


Jack A. Goncalo

*Cornell University*, [jag97@cornell.edu](mailto:jag97@cornell.edu)

Barry M. Staw

*University of California, Berkeley*, [staw@haas.berkeley.edu](mailto:staw@haas.berkeley.edu)

Follow this and additional works at: <https://digitalcommons.ilr.cornell.edu/obpubs>

 Part of the [Organizational Behavior and Theory Commons](#)

Thank you for downloading an article from DigitalCommons@ILR.

**Support this valuable resource today!**

---

This Article is brought to you for free and open access by the Organizational Behavior at DigitalCommons@ILR. It has been accepted for inclusion in Faculty Publications - Organizational Behavior by an authorized administrator of DigitalCommons@ILR. For more information, please contact [catherwood-dig@cornell.edu](mailto:catherwood-dig@cornell.edu).

If you have a disability and are having trouble accessing information on this website or need materials in an alternate format, contact [web-accessibility@cornell.edu](mailto:web-accessibility@cornell.edu) for assistance.

---

## Individualism-Collectivism and Group Creativity

### Abstract

Current research in organizational behavior suggests that organizations should adopt collectivistic values because they promote cooperation and productivity, while individualistic values should be avoided because they incite destructive conflict and opportunism. In this paper, we highlight one possible benefit of individualistic values that has not previously been considered. Because individualistic values can encourage uniqueness, such values might be useful when creativity is a desired outcome. Although we hypothesize that individualistic groups should be more creative than collectivistic groups, we also consider an important competing hypothesis: Given that collectivistic groups are more responsive to norms, they might be more creative than individualistic groups when given explicit instructions to be creative. The results did not support this competing hypothesis and instead show that individualistic groups instructed to be creative are more creative than collectivistic groups given the same instructions. These results suggest that individualistic values may be beneficial, especially when creativity is a salient goal.

### Keywords

individualism, collectivism, group-creativity, brainstorming, divergent thinking, organizational behavior

### Disciplines

Organizational Behavior and Theory

### Comments

#### Suggested Citation

Goncalo, J.A. & Staw, B.M. (2006). Individualism-collectivism and group creativity. Retrieved [insert date], from Cornell University, School of Industrial and Labor Relations site:  
<http://digitalcommons.ilr.cornell.edu/obpubs/1/>

#### Required Publisher Statement:

Copyright by Elsevier. Final paper published as Goncalo, J.A. & Staw, B.M. (2006). Individualism-collectivism and group creativity. *Organizational Behavior and Human Decision Processes*, 100, 96-109.

Forthcoming in *Organizational Behavior and Human Decision Processes*

Individualism-Collectivism and Group Creativity

Jack A. Goncalo

School of Industrial and Labor Relations

Cornell University

Ithaca, NY 14853

[jag97@cornell.edu](mailto:jag97@cornell.edu)

Tel: (607) 255-2085

Fax: (607) 255-2261

Barry M. Staw

Haas School of Business

University of California, Berkeley

Berkeley, CA 94720-1900

[staw@haas.berkeley.edu](mailto:staw@haas.berkeley.edu)

Tel: (510) 642-6357

November 2005

## Abstract

Current research in organizational behavior suggests that organizations should adopt collectivistic values because they promote cooperation and productivity, while individualistic values should be avoided because they incite destructive conflict and opportunism. In this paper, we highlight one possible benefit of individualistic values that has not previously been considered. Because individualistic values can encourage uniqueness, such values might be useful when creativity is a desired outcome. Although we hypothesize that individualistic groups should be more creative than collectivistic groups, we also consider an important competing hypothesis: Given that collectivistic groups are more responsive to norms, they might be more creative than individualistic groups when given explicit instructions to be creative. The results did not support this competing hypothesis and instead show that individualistic groups instructed to be creative are more creative than collectivistic groups given the same instructions. These results suggest that individualistic values may be beneficial, especially when creativity is a salient goal.

Keywords: Individualism, Collectivism, Group-Creativity, Brainstorming, Divergent Thinking

## Individualism-Collectivism and Group Creativity

Over the past two decades, the U.S business community has been keenly interested in differences between Asian and Western cultures. Spurred by Japan's economic success, there was widespread enthusiasm during the 1980's for applying Japanese management techniques to American businesses. Best-selling management books (e.g., Pascale & Athos, 1981; Ouchi, 1981) and the popular press heralded efforts by American companies to implement procedures (such as quality circles and autonomous work teams) that might re-create the cooperative atmosphere of a typical Japanese organization (Kagono, Nonaka, Sakamoto & Okumura, 1985). Since that time, even as the source of rapid economic growth has shifted from Japan to China, interest in Asian business practices has continued unabated.

Attention to Asian work practices has coincided with and perhaps fueled an increasing reliance on work groups in Western organizations (Ilgen, et al, 1993). U.S. corporations have become increasingly "team" based (McGrath, 1997), with employees spending a larger proportion of their time working in groups (Ilgen, 1999). As a result, it has become increasingly important to understand how employees might best meet the demands of a cooperative work environment. And, according to many management scholars, what is needed is a fundamental shift from the individualistic mindset that has traditionally characterized the American workplace to a more collectivistic approach that places the needs of the group over those of the individual (Locke, Tirnauer, Goldman, Latham & Weldon, 2000).

Moving from an individualistic to collectivistic orientation has many potential implications. For example, it has been observed that collectivistic group values reduce social loafing and increase cooperation (Wagner, 1995), and that people in collectivistic organizational cultures will identify more strongly with their work groups (Chatman, Polzer, Barsade and

Neale, 1998). However, there may also be some downside risks associated with a shift toward collectivism. Although collectivistic values may promote feelings of harmony and cooperation, they may also extinguish the creative spark necessary for innovation. Given the widely recognized importance of creativity for sustaining competitive advantage, such a byproduct of collectivism might have considerable negative consequences (Kanter, 1988).

To explore this possibility, we present an experiment designed to show how an individualistic vs. collectivistic orientation can influence the creativity of people working on a group task. This paper proceeds as follows. First, we describe the basic elements of individualism and collectivism by describing how people in these contrasting cultures view themselves in relation to others. Second, we link individualism and collectivism to creativity and argue that individualism is preferable when creativity is the desired outcome. Third, we consider an important counter-argument to our basic position. We explore whether people in collectivistic cultures may also be creative if they are instructed to arrive at creative solutions (Flynn & Chatman, 2001). Finally, we test these alternative hypotheses in a laboratory experiment on group creativity.

### *Defining Individualism and Collectivism*

Just as Western businesses have intensified their efforts to learn from Asian organizations, so too has there been a rise in research on cross-cultural differences between the two regions (e.g., Ilgen, Major, Hollenbeck, & Segoe, 1993). Asian and Western cultures have been distinguished along a variety of characteristics (Cohen & Nisbett, 1994; Triandis, 1994). However, it is the dimension of individualism and collectivism that has received the most attention by psychologists specializing in cross-cultural research.

Cultural values of individualism and collectivism differ in their relative emphasis on independence versus interdependence with one's group (Markus & Kitayama, 1991). In individualistic cultures, people are viewed as independent and possessing a unique pattern of traits that distinguish them from other people (Markus & Kitayama, 1994). In contrast to such independence and uniqueness, people in collectivistic cultures view the self as inherently interdependent with the group to which they belong. Therefore, whereas people in individualistic cultures often give global and abstract descriptions of themselves (e.g. I am optimistic), people in collectivistic cultures might ask how they could possibly describe themselves in the absence of information about a particular situation (Bachnik, 1994). To someone from a collectivistic culture, a relatively abstract description of the person can appear artificial because it implies that he or she is the same regardless of context (Cousins, 1989).

One of the most important consequences of these divergent views of the self is the degree of conformity that is observed in social settings. A meta-analysis of studies using Asch's (1956) line judgment task suggested that Asians demonstrated a stronger tendency to conform than Americans (Bond & Smith, 1996). In fact, the very concept of conformity may have different connotations in different cultures. While conformity is often viewed negatively in an individualistic culture, uniqueness can be viewed as a form of deviance and conformity associated with harmony in a more collectivistic culture (Kim & Markus, 1999).

Because the person's identity is closely linked to his/her social group in collectivistic cultures, the primary goal of the person is not to maintain independence from others, but to promote the interests of the group (Davidson, Jaccard, Triandis, Morales & Diaz-Guerrero, 1976). In contrast, most people in individualistic cultures assume that their identity is a direct consequence of their unique traits. Because the norms of individualistic cultures stress being

“true” to one’s self and one’s unique set of needs and desires (Fiske, Kitayama, Markus, & Nisbett, 1998), the person may be encouraged to resist social pressure if it contradicts his/her own values and preferences. Thus, people in individualistic cultures can be expected to be consistent in their views and maintain them in the face of opposition, while people in collectivistic cultures might consider the failure to yield to others as rude and inconsiderate.

In collectivistic cultures, self-esteem is not derived from idiosyncratic behavior or from calling attention to one’s own unique abilities. There is greater emphasis on meeting a shared standard so as to maintain harmony in one’s relationship to the group (Wink, 1997). People in collectivistic cultures are therefore not motivated to stand out from their group by competitive acts of achievement or even making positive statements about themselves (Kitayama, Markus & Lieberman, 1995). Instead, there is a tendency toward self-improvement motivated by concern for the well-being of the larger social group. Whereas members of individualistic cultures strive for special recognition by achieving beyond the norms of the group, collectivists are more motivated to understand the norms for achievement in the particular context so as to meet that standard (Azuma, 1994). Therefore, one might expect groups defined by collectivistic norms to be high in collaboration and achievement of collective goals, whereas groups with individualistic norms may have greater variability in performance among its individual members.

### *The Malleability of Cultural Frames*

Most of the research on the individual-collectivism dimension has found that growing up in a particular country alters the person’s self concept (Markus & Kityama, 1991) and that such differences in self-construal, much like a personality trait, can be used to predict behavior across a wide variety of situations. Typically, this research has compared differences between East Asians and European North Americans (Lehman, Chiu & Schaller, 2004) using nationality as a



proxy for a person's underlying cultural values of individualism versus collectivism (Brockner, 2003). In spite of such between-country differences, however, it should be recognized that there can also be substantial within-country variation on this dimension. (Oyserman, Coon & Kemmelmeier, 2002). Not only are there differences among individuals within a given country, but variance can also be demonstrated across discrete social units. For example, Chatman and Jehn (1994) showed that there are systematic differences among American firms on this dimension. They noted that individualistic firms are those that attempt to increase performance through the accomplishment of individual goals, stressing the virtues of competition among employees for pay and promotions. In contrast, collectivistic firms place greater emphasis on organization-wide objectives, making greater efforts to promote cooperation among employees in achieving their collective goals.

The variability of firms on individualism-collectivism suggests that cultural values may be more malleable than previously assumed (Brockner, 2003). In addition to being the product of a lifetime of socialization, cultural values might also be subject to more immediate influences in the social situation. Self construals like individualism-collectivism might be situationally primed, so that a particular set of values becomes salient to the person. For instance, Gardner, Gabriel & Lee (1999) found that European North American students mentioned more group attributes and fewer personal attributes when their collective self was primed as compared to when their private self was primed. This phenomenon, called "cultural frame switching" has also been demonstrated in studies of bi-cultural individuals where multiple cultural identities have been primed in a variety of ways (see Hong, Y.Y., Chiu, C-y, Kung, T.M., 1997). For example, in one study, bicultural participants were primed with either Chinese or American cultural symbols (e.g. the Chinese Dragon or Mickey Mouse), with the result that people who

were primed with Chinese symbols made more situational attributions than those who were primed with American symbols (Hong, Morris, Cheu, & Martinez, 2000).

An important implication of research on cultural frame switching is the possibility that organizations can emphasize certain cultural values, depending on their presumed utility for the work environment. As we have noted, many organizational scholars have argued for the usefulness of collectivistic values, emphasizing the greater social harmony and interpersonal helping that may be associated with collectivism (Flynn & Chatman, 2001). These scholars have also stressed the potential for greater social control with a culture that is based on strong interpersonal ties and the acceptance of group norms (O'Reilly & Chatman, 1996). Because individuals are seen as striving to be accepted and approved by others in a collectivistic culture, there may be greater potential for social control in organizations displaying such a culture. Unfortunately, it may be precisely this increased level of conformity that may also undermine creativity in organizations that promote collectivistic values.

#### *Individualism-Collectivism and Group Creativity*

Creativity has typically been defined by ideas that are both novel and useful (Amabile, 1983). Initially, research on creativity was person-centered, focusing on the personality traits of highly creative people (Helson, 1996). Highly creative individuals were found to have traits such as independence of judgment, autonomy and self-confidence (Baron & Harrington, 1981) that allowed them to break with their social and occupational groups to propose novel ideas that might not be readily accepted. Because creative ideas are often deviant (Moscovici, 1976), most people are reluctant to express them out of fear of receiving negative evaluations from other group members (Diehl & Strobe, 1987). Therefore, it can be argued that creativity and conformity are intertwined, not only in understanding why certain people are more creative than

others, but also in explaining why certain situations may generally encourage or stifle creative behavior.

Research on creativity, at the group level, has highlighted the potential tradeoff between social control and creativity (Nemeth & Staw, 1989). A long tradition of group research has demonstrated that people often conform to the majority view, even when they know it is wrong (Asch, 1956). Typically, deviants are viewed as difficult and as an impediment to the group's ability to achieve its goals or reach a shared decision (Nemeth & Staw, 1989). Although conformity pressures can help maintain some level of group cohesion and may sometimes be necessary for the group to be productive, such pressures can also pose a limitation for groups that seek creativity. For example, research on minority influence suggests that dissent, even when wrong, actually causes groups to think more divergently and ultimately to solve problems more creatively (Nemeth & Wachtler, 1983; Nemeth & Kwan, 1985). To the extent that conformity limits the expression of dissenting viewpoints, it can stifle a group's ability to think of novel solutions to a problem. Research on brainstorming also points to the limitations of conformity. Even though the primary goal of brainstorming groups is to generate a wide variety of ideas, people often refrain from expressing ideas that they think are too strange or unrealistic, because they fear negative evaluations from other group members (Osborne, 1957; Diehl & Strobe, 1987). The net result may be that many creative ideas are never expressed, nor acted upon.

We argue that a particular dimension of culture can serve to either intensify or mitigate conformity pressures in task groups. Given that collectivistic cultures promote harmony and interdependence, we would expect to find a higher level of conformity in such cultures (Bond & Smith, 1996). Given that individualistic cultures value uniqueness and encourage people to be independent from the group, it is likely that such a culture would not only reduce conformity

pressures but also prompt individuals to maintain their points of view in the face of opposition (Nemeth, 1985). The resulting diversity of ideas expressed and tolerance of competing viewpoints should, over time, facilitate group creativity.

In summary, we hypothesize that individualism offers a more conducive climate for creativity than that of collectivism. In group settings, for example, we would expect that an individualistic culture would be associated with reduced conformity pressures, which may contribute to the ability of a group to generate a greater number of divergent ideas and to arrive at task solutions that are judged to be more creative. Thus,

**Hypothesis 1:** Individualistic groups will have higher performance than collectivistic groups on creativity tasks.

*Competing Hypothesis: Norms for Creativity*

Although there are many reasons to believe that a collectivistic culture can impede creativity, some organizational researchers (e.g. O'Reilly & Chatman, 1996; Flynn & Chatman, 2001) have argued that a strong (and collectivistic) culture may actually improve creativity. In support of this claim, these authors cite some prominent businesses (e.g., Hewlett Packard, IBM, and 3M) that are known for both their collectivistic cultures and for innovation. They argue that these firms have set widely accepted goals for innovation, often supported by specific targets such as a percentage of sales generated by new products. In these firms, innovation is expected and the expectations are backed by strong social norms. Therefore, if innovation is the stated goal of the firm, it is possible that a collectivistic culture provides additional support for such an objective.

In group settings, one might similarly predict that collectivistic values will encourage creativity if that is the expressed goal or objective of the group. If a task group is instructed to find creative solutions to a problem, for example, we might logically expect it to display more creativity than when it has been directed to find practical solutions. However, given the arguments of O'Reilly & Chatman (1996) and Flynn & Chatman (2001), we might also expect to find an interaction between the instructions given to a group and the dimension of individualism-collectivism. When specifically instructed to seek creative solutions to a problem, collectivistic groups might display greater evidence of creativity than individualistic groups.

**Hypothesis 2:** There will be an interactive effect of task objectives and group culture on creative performance.

**Hypothesis 2a:** Collectivistic groups instructed to be creative will be more creative than individualistic groups instructed to be creative.

In contrast, when instructed to find practical solutions to a problem, collectivistic groups might exhibit less creativity than individualistic groups. More practical ideas are typically less divergent (Kirton, 1976), and more likely to reflect continuity with the ideas proposed by others (Sternberg, Kaufman & Pretz, 2003). Such ideas, while less creative, may be useful when a group desires incremental improvement over more creative ideas that take the group in a new direction. Furthermore, recent research suggests that people are responsive to instructions to be either “creative” or “practical” and that the ideas generated under different instructional conditions are qualitatively different in the desired direction (O'Hara & Sternberg, 2000). Given that collectivistic groups might be more responsive to a shared goal, they should also be more responsive to instructions to be practical than individualistic groups. Therefore, it is possible to make the following prediction:

**Hypothesis 2b:** Collectivistic groups instructed to be practical will be less creative than individualistic groups instructed to be practical.

### *Unleashing Creativity*

In contrast to the argument that innovation is a collective or normatively sanctioned activity, many organizational researchers have noted that innovation often results from individuals deviating from accepted or normative practices. For example, Katz and Kahn (1978) have argued that organizations need to preserve individual spontaneity and initiative in order to remain adaptive to changing environmental conditions. Kanter (1988) has likewise noted that flexibility in the design of work roles and the empowerment of individuals doing the work are what allow innovation to occur throughout the organization. In a similar vein, Nemeth and Staw (1989) have stressed that innovation is the product of the free flow of ideas that can result from dissent rather than consensus. Each of these arguments, in essence, defends the virtues of individual freedom in organizational settings. And, when translated to the group context, these arguments not only imply that individualistic groups will display more creativity than those with collectivistic values (as specified by Hypothesis 1), but that the culture of a group might interact with a goal for creativity in a manner that is quite different from that of Hypothesis 2.

There may be a positive interaction of individualism and organizational goals, such that the advantages of an individualistic culture may be especially salient when there are explicit goals for innovation. The well-known product design firm, IDEO, may be a case in point. As described by Sutton & Hargaddon (1996), employees at IDEO are specifically instructed to be creative and the staff is well-aware of such a mandate for creativity. Yet, this organization has a

rather individualistic culture where people are encouraged to stand out and be unique. Therefore, not only is it possible for goals for creativity and individualism to co-exist in the same organization; it is quite likely that there is an interaction between these two factors. That is, an organization's desire for creativity may serve to unleash the creative talents of individual members in the firm. Alternatively, it can be argued that the creative capabilities normally associated with individualistic cultures may lie dormant in situations that call for practical solutions. These capabilities may, however, come to the fore when there are specific demands for creativity. When the situation calls for creativity, an individualistic culture may thus have an inherent advantage over a more collectivistic culture. Translated to the group level, we would therefore expect to find an interaction of group culture and objectives, as follows:

**Hypothesis 3:** Group culture and objectives will have an interactive effect on creativity, such that the advantages of an individualistic (as opposed to collectivistic) culture will be strongest when groups are instructed to be creative.

### *Overview of the Research*

In order to study the effects of culture on creativity, we experimentally manipulated an individualistic vs. collectivistic orientation as well as specific instructions to be creative vs. practical. We experimentally varied the salience of individualism or collectivism in order to better discern causality, since the common practices of either using intact social groups (e.g., comparing Asians vs. European Americans) or assigning individuals to conditions on the basis of personality differences (e.g., high vs. low collectivism) do not control for confounding variables (see Brockner, 2003). By experimentally manipulating both cultural orientation and group

objectives, it is possible to test for possible main effects of individualism-collectivism as well as the hypothesized interaction of culture and objectives on group creativity.

## Method

### *Participants and Design*

Two hundred and four students at a large American university in an introductory course on Organizational Behavior participated in the study in exchange for course credit. The sample consisted of 53% females, 59 % Asian-Americans and 23% European-Americans, 6% East Indian, 3% Hispanic, 3% African-American and the remaining 6% identified themselves as “other”.<sup>1</sup> The study was a 2 (Culture: Individualistic versus Collectivistic) X 2 (Instructions: Creative versus Practical) factorial design. Groups of three people were randomly assigned to each of the four conditions resulting in 17 groups per condition and a total of 68 groups.

### *Procedure*

Participants were told that they were taking part in a study of how groups interact to solve problems. The study consisted of three phases. In the first phase, participants were asked to complete a survey that was designed to prime either a collectivistic or individualistic mindset. In the second phase, each group was asked to generate ideas about how to solve a particular problem. In the third phase, each group was asked to select the idea that they believed was either the most creative or practical depending on the experimental condition to which they were assigned. The entire study took approximately one hour to complete.

### *Phase 1: Manipulation of Cultural Orientation*

Before the study began, participants were asked to fill out a pre-discussion survey that was ostensibly designed to determine how they view themselves in relation to other people. All



participants were asked to write at least three statements in response to each question, and they were given ten minutes to complete the survey.

Participants in the individualistic condition were asked to respond to the following three questions:

- A. Write three statements describing yourself.
- B. Write three statements about why you think you are not like most other people.
- C. Write three statements about why you think it might be advantageous to “stand out” from other people.

Conversely, participants in the collectivistic condition were asked to respond to the following three questions:

- A. Write three statements describing the groups to which you belong.
- B. Write three statements about why you think you are like most other people.
- C. Write three statements about why you think it might be advantageous to “blend in” with other people.

Although people typically respond to survey questions in an effort to communicate their attitudes and beliefs, it is also the case that the process of responding to questions may itself have an effect on peoples’ attitudes and beliefs (see Schwarz, 1999 for an extensive review). That is, people may infer their attitudes based on their responses to particular questions. Salancik and Conway (1975), for example, found that when subjects responded to a series of questions that led them to recall specific behaviors indicating they were relatively supportive of religion, they reported feeling more religious than a group of subjects who were led to recall the opposite. This finding is all the more surprising given that people tend to have fairly well defined views on religion prior to participating in an experiment. Salancik and Conway (1975: 839) concluded rather humorously that, “Rather than attempting to figure out what goes on inside someone’s head, it may be easier to simply put things into his head and see what comes out in overt behavior.” Our culture manipulation followed the same logic. Instead of pre-selecting people

based on their personal beliefs related to individualism or collectivism, we led them to recall specific instances in which they behaved in accordance with one set of values or another, in an effort to manipulate their cultural orientation. In essence, this manipulation extended the logic of cultural priming to the particular dimension of individualism-collectivism (see Hong, et. al., 1997, 2000, 2003).

### *Phase II: Decision making task*

After ten minutes elapsed, the experimenter returned and collected the pre-discussion surveys. The experimenter then introduced the participants to the next task. Each group was instructed to be either creative or practical. Instructions to be creative vs. practical were necessary for two reasons. First, despite the fact that participants were asked to generate ideas, past research suggests that the goal of being creative while completing such tasks can be ambiguous unless the group is given specific instructions (Katz & Poag, 1979). Second, manipulating task goals allowed us to specifically test for the interaction predicted by Hypothesis 3. Instructions to be creative or practical were manipulated by substituting the appropriate word (in parentheses) in the following communication to participants :

“Next, I am going to ask you to complete a (practical/creative) decision making task. This task is based upon a scenario that takes place at a major West Coast University: After years of mismanagement and poor quality food, the University restaurant has finally gone bankrupt and is being shut down. The school administration is trying to decide what new business should go into that space. You have fifteen minutes to come up with as many (practical / creative) solutions to their problem as possible.”

The experimenter then handed a single sheet of lined paper to the person seated to his right. The group brainstormed potential business ideas, while one person recorded the group’s solutions. The recorder was instructed to write down each and every solution that was proposed. The recorder was also allowed to participate in the discussion.

### *Phase III: Idea selection*

After the idea generation phase, the experimenter then handed each group a separate sheet and instructed each group to select (as a group) the idea that they agreed was the most creative or practical (depending on the experimental condition). Once the group selected an idea, they were instructed to write the selected idea on a line. Each group had 10 minutes to make a selection of the most creative (or practical) solution.

### *Dependent Variables*

Idea Generation: Creativity in groups often depends on the ability to generate ideas. In fact, a number of creativity researchers have noted the importance of the sheer number of ideas in arriving at creative solutions (e.g., Campbell, 1969; Simonton, 1999). Therefore, we first measured creativity by counting the total number of ideas each group was able to produce in the fifteen minute idea generation period.

Convergent vs. divergent thinking: Convergent thinking tends to move toward a single solution to a problem, and involves the generation of multiple ideas that are of the same general category (Mayer, 1992; Guilford, 1956). In contrast, divergent thinking involves the generation of many ideas that are qualitatively different from one another. Divergent thinking is widely considered to be an important antecedent to creativity because creative solutions are defined as unique or original in nature (Amabile, 1983).

Following past research (Guilford, 1956; Larey & Paulus, 1999) convergent thinking was measured in terms of the flexibility of the ideas generated by the group, where flexibility refers to the extent to which groups are able to generate ideas that cross categories. To assess flexibility, two coders who were blind to the conditions and predictions of the study were instructed to categorize all of the ideas generated in the entire sample by their semantic similarity. For instance, all of the ideas that involved using the space as a restaurant were

categorized together (e.g. another restaurant such as a Jack-in-the Box, Denny's, or food court). Next, the coders counted the number of ideas generated within each category. Each particular idea then received a score based on the number of times a given category of idea appeared in the sample. For example, there were 111 restaurant ideas in the sample, so each restaurant idea was given a score of 111. In contrast, there were only 19 ideas suggesting that the empty space be used for a library, so each library idea received a score of 19. Finally, the scores for each idea were averaged together so that each group had a final score which reflected the diversity of ideas they were able to generate. Therefore, a *higher* score meant that a group's ideas were on average *more common (or convergent)*, while a *lower* score meant that a group's ideas were on average *more unique (or divergent)*.

Recall that each group was told that a restaurant had previously occupied the empty space. Therefore, a second way to measure convergent solutions to this problem would be to examine how often each group suggested that the empty space be used for another restaurant. Divergent thinking would involve generating business ideas that are different from the previous solution of using the space as a restaurant. Hence, two coders (who were blind to the conditions and hypotheses of the study) counted the number of restaurant ideas generated by each group. A restaurant was defined as a business that primarily sells food. Since there was substantial agreement between the two coders ( $r = .97, p < .001$ ), their assessments of the number of restaurant ideas generated by each group were averaged together. The total number of restaurant ideas was then divided by the total number of ideas generated.

Subjective Rating of Creativity: Two (additional) coders, who were also blind to the experimental conditions and hypotheses of the study, coded each idea for creativity. The coders

were told to emphasize the “novelty” of each idea while making their ratings. Each coder was given a scale of 1 to 5, with the following definitions for specific points on the scale:

5 = Extremely creative. A creative idea is extremely novel or original.

3 = Average creativity

1 = Very un-creative. An uncreative idea is extremely common. These ideas are probably the most obvious ideas to come to mind.

Because the two coders demonstrated significant agreement in their ratings of the ideas ( $r = .65$ ,  $p < .01$ ), their assessments were averaged together. Scores for each of the ideas generated by the group were then averaged into a single index of overall group creativity.

Creativity of selected idea: The creative process does not end with the idea generation phase.

One idea is typically selected for implementation. Therefore, a more stringent test of our hypotheses might require a rating of the ideas selected by each group for implementation.

Accordingly, two separate coders (who were blind to the hypotheses and conditions of the study) rated each idea selected by the group for its creativity. Using the same 1 to 5 scale as the assessment of all proposed ideas, the two coders demonstrated significant agreement ( $r = .71$ ,  $p < .001$ ). We therefore averaged the ratings into a single measure of the creativity of the selected idea.

Manipulation Checks: To check the effectiveness of the manipulation of cultural orientation, each participant’s responses to the pre-discussion questionnaire was coded. Since the participant wrote at least three statements in response to each culture orientation question, there were nine or more statements on individualism-collectivism measured for each person. Two blind coders evaluated each participant’s statements on the degree to which they reflected the values of individualism or collectivism. Both coders were unaware of the hypotheses and experimental

conditions (that is, the cultural questions to which the participants responded). The coders were given the following definitions of individualism and collectivism:

*Individualism:* A set of cultural values that emphasizes individual autonomy, the prioritization of personal goals over group goals, and the definition of one's self in terms of one's individuality and uniqueness from the group.

*Collectivism:* A set of cultural values that emphasize group harmony, the prioritization of collective goals over personal goals, and the definition of one's self in terms of the groups one belongs to.

The coders rated the statements provided by each participant on 5-point scales, with 1 denoted as "individualistic", 5 denoted as "collectivistic" and 3 representing "can't tell." Each participant received three scores corresponding to the three sets of statements. The three scores were then averaged to a single score for each participant. Finally, the individual scores were averaged to the group level by adding all the participants' scores for each group. All ratings were averaged across the coders, since there was significant agreement between the two coders on the scores received by individuals ( $r = .84, p < .001$ ) and groups ( $r = .91, p < .001$ ).

As a second cross-check of the effectiveness of the manipulation, we conducted an additional analysis of the effects of priming for individualism vs. collectivism. Forty undergraduates (who did not participate in the main experiment) were administered a survey in which they were first primed for either individualism or collectivism and then subsequently assessed on this cultural dimension. Participants first completed the open-ended items used to manipulate individualism versus collectivism in the present experiment (i.e., they were asked to write nine statements according to their randomly assigned condition), and then completed a

popular five-item measure of individualism-collectivism drawn from previous research (Wagner, 1995).

## Results

### *Manipulation Checks*

A 2 (collectivistic versus individualistic orientation) X 2 (creative versus practical instructions) ANOVA on the group culture manipulation rating revealed only a significant main effect for culture,  $F(1, 64) = 294.42, p < .001$  that was in line with the manipulation.

An ANOVA was also conducted on the results from the additional survey. Consistent with the manipulation, participants in the individualistic condition reported being significantly more individualistic than participants in the collectivistic condition,  $F(1, 38) = 6.09, p < .05$ .

### *Idea Generation*

Univariate analyses of variance indicated no significant main effect for culture,  $F(1, 64) = 1.08, ns$ , and no significant main effect for instructions,  $F(1, 64) = .34, ns$ , on the number of ideas generated by the group. However, there was a significant interaction between culture and instructions,  $F(1, 64) = 12.94, p = .001$  (See Figure 1). We explored this interaction first by examining the effect of culture among groups who were instructed to be creative and then among groups who were instructed to be practical. The results showed that individualistic groups who were instructed to be creative generated significantly more ideas ( $M = 37.4$ ) than collectivistic groups who were instructed to be creative ( $M = 26.1$ ),  $F(1, 32) = 11.26, p < .01$ . Conversely, collectivistic groups who were instructed to be practical generated somewhat more ideas ( $M = 33.5$ ) than individualistic groups instructed to be practical ( $M = 27.2$ ), though the difference between these means was only marginally significant,  $F(1, 32) = 3.13, p < .10$ .

-----  
Insert Figure 1 here  
-----

We further explored the interaction by examining the effect of instructions among individualistic groups and then among collectivistic groups. The results showed that individualistic groups who were instructed to be creative generated significantly more ideas ( $M = 37.4$ ) than individualistic groups who were instructed to be practical ( $M = 27.2$ ),  $F(1, 32) = 8.81$ ,  $p < .01$ . In contrast, collectivistic groups generated significantly more ideas when instructed to be practical ( $M = 33.5$ ) than when they were instructed to be creative ( $M = 26.1$ ),  $F(1, 32) = 4.51$ ,  $p < .05$ .

#### *Convergent vs. divergent thinking*

Univariate analyses of variance revealed no significant main effect for culture,  $F(1, 64) = 2.58$ , ns and no significant main effect for instructions,  $F(1, 64) = .26$ , ns. However, there was a significant interaction between culture and instructions,  $F(1, 64) = 6.46$ ,  $p < .05$ . We examined this interaction first by comparing individualistic groups and collectivistic groups instructed to be creative. The results showed the individualistic groups instructed to be creative generated more unique ideas ( $M = 30.08$ ) than collectivistic groups given the same instructions ( $M = 37.45$ ),  $F(1, 32) = 9.71$ ,  $p < .01$ . No other internal comparisons yielded significant results.

As noted earlier, convergent versus divergent thinking was also measured as the proportion of restaurant ideas generated by the group. Univariate analyses of variance showed no significant main effect for culture,  $F(1, 64) = 2.60$ , ns, and no significant main effect for instructions,  $F(1, 64) = .033$ , ns. However, there was a marginally significant interaction between culture and instructions,  $F(1, 64) = 3.41$ ,  $p < .10$ . We examined the interaction first by



comparing individualistic and collectivistic groups who were instructed to be creative. The results showed that collectivistic groups instructed to be creative generated significantly more restaurant ideas as a percentage of the total number of ideas generated ( $\underline{M} = 14\%$ ) than did individualistic groups ( $\underline{M} = 7\%$ ) given the same instructions to be creative  $F(1, 32) = 9.73, p < .01$ . No other internal comparison yielded significant results.

### *Subjective ratings of creativity*

Univariate analyses of variance revealed no significant main effect for culture,  $F(1, 64) = 2.09, ns$ , and no significant main effect for instructions,  $F(1, 64) = 1.44, ns$ , on the rated creativity of ideas generated by the groups. However, once again, there was a significant interaction between culture and instructions,  $F(1, 64) = 5.01, p < .05$ . To understand the nature of the interaction, we first compared individualistic and collectivistic groups who were instructed to be creative and then those who were instructed to be practical. The results showed that, when instructed to be creative, individualistic groups generated ideas that were rated as more creative ( $\underline{M} = 3.03$ ) than those generated by collectivistic groups ( $\underline{M} = 2.83$ ),  $F(1, 32) = 9.18, p < .01$ . However, when instructed to be practical, there was no significant difference between the ideas generated by individualistic ( $\underline{M} = 2.84$ ) and collectivistic groups ( $\underline{M} = 2.89$ ),  $F(1, 32) = .14, ns$ .

We also explored the interaction by comparing the role of instructions among both individualistic and collectivistic groups. The results showed that individualistic groups generated ideas that were rated as more creative when they were instructed to be creative ( $\underline{M} = 3.03$ ) than when they were instructed to be practical ( $\underline{M} = 2.89$ ),  $F(1, 32) = 5.45, p < .05$ . However, there was no significant difference in the ratings of creativity between collectivistic groups instructed to be creative ( $\underline{M} = 2.83$ ) versus those groups that received practical instructions ( $\underline{M} = 2.89$ ),  $F(1, 32) = .397, ns$ .

Although significant differences were found between individualistic and collectivistic groups, particularly when they were instructed to be creative, the mean level of creativity for the highest condition was rated as only slightly “above average” by our coders. Therefore, it is possible that observed differences between experimental conditions could be due to differences in lower or midrange levels of creativity. Because we were interested in knowing whether there would be differences in highly creative ideas generated by the various groups, we re-analyzed the data using a measure that was more reflective of high levels of creativity.

We calculated the number of ideas generated by each group that were rated as “4” or higher on the five-point scale of creativity, and then divided that number by the total number of ideas generated. This yielded a proportional measure of high creativity. Using this measure, univariate analyses of variance revealed no main effect of culture,  $F(1, 64) = .88$ , ns, but a main effect of instructions,  $F(1, 64) = 5.79$ ,  $p < .05$ . Groups instructed to be creative generated a higher percentage of creative ideas ( $M = 28\%$ ) than groups instructed to be practical ( $M = 21\%$ ). There was also a significant interaction between culture and instructions,  $F(1, 64) = 4.78$ ,  $p < .05$ . As shown in Figure 2, individualistic groups instructed to be creative generated a significantly higher percentage of creative ideas ( $M = 32\%$ ) than collectivistic groups given the same instructions ( $M = 23\%$ ),  $F(1, 32) = 5.93$ ,  $p < .05$ . However, when instructed to be practical, there was not a significant difference between collectivistic ( $M = 23\%$ ) and individualistic groups ( $M = 19\%$ ) on this proportional measure of creativity,  $F(1, 32) = .661$ , ns. As one might expect, individualistic groups instructed to be creative ( $M = 32\%$ ) generated a greater percentage of creative ideas than individualistic groups instructed to be practical ( $M = 19\%$ ),  $F(1, 32) = 10.94$ ,  $p < .01$ . However, there was no significant difference between

collectivistic groups instructed to be creative ( $\underline{M} = 23\%$ ) versus those instructed to be practical ( $\underline{M} = 23\%$ ),  $F(1, 32) = .023$ , ns.

-----  
Insert Figure 2 here  
-----

### *Creativity of selected idea*

Univariate analyses of variance revealed a significant main effect for culture,  $F(1, 64) = 6.13$ ,  $p < .05$ , such that individualistic groups selected ideas that were rated as significantly more creative ( $\underline{M} = 2.77$ ) than collectivistic groups ( $\underline{M} = 2.18$ ). There was also a significant main effect for instructions,  $F(1, 64) = 14.08$ ,  $p < .01$ , such that groups instructed to select their most creative idea chose ideas that were rated as significantly more creative ( $\underline{M} = 2.92$ ) than groups instructed to select their most practical idea ( $\underline{M} = 2.03$ ). There was no significant interaction between culture and instructions,  $F(1, 64) = .00$ , ns, on the ratings of selected ideas.<sup>2</sup>

## Discussion

The purpose of this study was to understand the effects of individualism and collectivism on group creativity. We argued that an individualistic culture should foster creativity because it emphasizes uniqueness and standing out from one's group, instead of cohesiveness and conformity with group norms. This argument would support a main effect of individualism on groups' ability to perform on creative tasks. Nonetheless, we also considered the position that collectivistic groups may actually be more creative when there are specific norms or instructions to be creative. The logic underlying such an interaction is that collectivistic groups would exert greater pressure on group members to achieve a specified goal such as task creativity. Finally,

we considered the contrasting argument that individualistic groups would be most creative when they are instructed to be creative. The logic of this alternative interaction is that, even though the creative capability of group members may be facilitated by individualistic values, these capabilities may lie relatively dormant when groups are directed toward practical solutions. Only when the group is instructed to be creative will the creative potential of its members be unleashed.

We analyzed the effects of cultural orientation (individualism vs. collectivism) and task instructions (creative vs. practical solutions) on three measures on creativity. On none of these measures (number of ideas, divergent ideas, and rated creativity of ideas) did we find any main effects of culture. However, we did find a significant interaction of cultural orientation and task goals. Underlying this interaction was a pattern of results showing that individualistic groups were more creative than collectivistic groups when there were specific instructions for creativity, while differences on the cultural variable were either non-significant or in the opposite direction when there were instructions for practicality. We also found that individualistic groups displayed more creativity when instructed to find creative as opposed to practical solutions, while collectivistic groups failed to show a similar shift in response to the instructions.

These findings provide important confirmation of the benefits of individualism for performance on a creative task. On every measure, individualistic groups were more creative than collectivistic groups when instructed to do so-- generating more ideas, presenting a greater number of ideas that depart from the pre-existing solution (i.e., restaurants), and posing ideas that were judged to be more novel. These results, while quite consistent, do not imply that individualistic groups will violate task goals, or that individualism is so powerful as to stimulate

creativity regardless of the purposes of the group. The results simply show that, when creativity is explicitly desired, individualism will serve to facilitate such performance.

#### *An Alternative Explanation*

Although one might logically interpret the results as providing evidence for the superiority of individualism (as opposed to collectivism) in stimulating group creativity, especially given instructions to be creative, there is an alternative explanation of the results. It is possible that individualistic groups may not be better at thinking independently, but simply superior at following directions. If this alternative is correct, we would expect to find that individualistic groups are not only superior to collectivistic groups on creativity when there are specific instructions to be creative, but they are also better (in terms of practicality) when there are specific instructions to be practical.

In testing this alternative explanation, we coded all the ideas generated by each group on their practicality. Two coders who were blind to the hypotheses and conditions of the study were asked to code each idea on a scale of 1 to 5. They were told that a score of “1” meant that the idea was, “Very impractical. An impractical idea is extremely unlikely to be implemented” while a score of “5” meant that the idea was, “Very Practical. A practical idea is extremely likely to be implemented.” There was significant agreement between the two coders ( $r = .86, p < .01$ ), so their ratings were averaged together.

Univariate analyses of variance revealed no significant main effect of culture,  $F(1, 64) = .92, ns$ , nor an interaction,  $F(1, 64) = .869, ns$ . There was only a main effect of instructions,  $F(1, 64) = 4.08, p < .05$ , such that groups who were instructed to be practical generated ideas that were rated as being significantly more practical ( $M = 3.04$ ) than groups instructed to be creative ( $M = 2.92$ ). These results would seem to rule out the possibility that individualistic groups were

simply better at following task instructions rather than being more creative than collectivistic groups.

### *Idea Generations Vs. Idea Selection*

In this study we explored not only the idea generation stage of the creative process, but also the selection of a particular idea. The results for idea selection revealed a main effect for culture such that individualistic groups selected the most creative ideas. Although this finding supports the general argument that individualism is more likely to promote creativity, we did not observe the interaction between culture and instructions that was found in the analyses of ideas generated by groups. One possibility is that the process of creativity is path dependent such that individualistic groups generated more ideas, which gave them a larger and more diverse pool of ideas from which to make their final selection. Unfortunately, this explanation is doubtful, since there was no main effect of culture on the total number of ideas generated, and the results held when the total number of ideas was included as a control variable.

Another possibility is that the process through which individualistic and collectivistic groups arrive at an agreement may be different. If people in individualistic groups aim to “stand out” by calling attention to their personal contributions, and the group has difficulty reaching consensus, then the idea selected may appear to be a compromise between multiple competing ideas. Consequently, instead of selecting only one idea from the list, an individualistic group may be more likely to select a multi-faceted idea that contains elements of more than one idea from their original list. For instance, instead of suggesting that a café be placed in the empty space, an individualistic group may be more likely to suggest a café with live music and a free massage. In other words, they may select more novel solutions as a means toward reaching agreement on a group solution.

To explore this possibility, we asked two additional coders to count the number of facets in each idea selected. Univariate analyses of variance revealed a significant main effect for culture,  $F(1, 64) = 7.03, p = .01$ , such that individualistic groups selected ideas that were more multi-faceted ( $M = 2.28$ ) than collectivistic groups ( $M = 1.54$ ). Furthermore, we found a significant positive correlation between the number of facets in the selected idea and its creativity rating derived from a separate set of coders ( $r = .64, p < .01$ ). While these results are speculative, they suggest that individualistic groups may have a unique way of selecting ideas for implementation, and this selection process may contribute to the creativity of group solutions.

#### *Implications for Organizational Innovation*

The results of this study not only provided some evidence for the value of individualism; they also shed light on a popular counter-argument. The notion that collectivistic groups can act creatively -- if they are simply instructed to do so-- did not receive support by any of our operationalizations of creativity. Although prior research suggests that individuals are more likely to accommodate group norms in a collectivistic culture, our results suggest that this does not necessarily mean that creativity will prevail, even when there are specific demands for creativity. Apparently the very dynamics that make group members more amenable to following instructions in a collectivistic setting may work against their consideration of creative solutions. Thus, the “norms for creativity” argument may not hold true, at least on group creativity tasks.

Although this research was conducted at the group level, one might logically consider its implications for organizational behavior. This is especially appropriate in the case of collectivistic practices being adopted by Western organizations, since these practices generally involve an emphasis on team rather than individual behavior.

Our results raise concerns about whether collectivistic cultures are best suited for contemporary organizations. Although collectivistic cultures may improve some aspects of organizational life (such as helping behavior and interpersonal cooperation), such cultures may also inhibit creativity. This is somewhat ironic, since the reason often cited for adopting collectivistic practices is their ability to bring greater innovation to the organization (e.g., Tushman & O'Reilly, 2002). While collectivistic ideas are touted for helping organizations adapt to changing environmental conditions, they may, according to our results, actually impede creativity under precisely those conditions that demand innovation.

Caution flags should also be raised about the more limited hypothesis that collectivism and strong norms for innovation can combine to bring creativity to organizations. We did not find any evidence for the interaction of collectivism and specific demands for creativity, as one might expect from the arguments of O'Reilly & Chatman (1996) and Flynn & Chatman (2001). At the root of their "norms for innovation" argument is the assumption that creativity is something that can be required and reinforced by the social structure of an organization. Of course, one problem with this argument is the fact that creativity, by its very nature, may result from the violation rather than enforcement of shared norms and procedures (Nemeth & Staw, 1989). Because a creative idea usually requires one to do something in a new or different way (Amabile, 1988), the greater the novelty of an idea the more likely will there be a departure from current beliefs and values of an organization. This is probably why organizations often regard the most innovative ideas as inherently threatening-- as something to be resisted by those who control both the resources and ideology of the firm (Frost & Egri, 1991; Nemeth, 1997).

We would expect collectivistic organizations to be more adept at exploitation than exploration (March, 1991). Because strong social pressures mean that coworkers are observing,



rewarding and sometimes punishing employee behavior, a collectivistic organization may be better able to mobilize people's efforts than an individualistic organization. There may, as a result, be stronger motivation, more attention to detail, and less deviance from accepted business practices. While these factors are often necessary for high work performance, they are not prerequisites for innovation. It is commonly argued (e.g., Sutton, 2001; Staw, 1995) that an innovative firm must tolerate greater variance in both work attitudes and behavior. Therefore, while an individualistic firm may not be as efficient as a collectivistic company, it is more likely to provide fertile ground for creative ideas.

### *Limitations*

An obvious limitation to this research is that our participants were undergraduate students working in groups that met for a short period of time. We cannot therefore be certain that our results would generalize beyond laboratory groups. It is possible that, within organizations, collectivistic groups tend to be associated with some characteristics that make them more innovative or that innovation interacts with a third variable associated with the individualism-collectivism dimension. However, many of the factors known to reduce creativity in laboratory groups (e.g., self-censorship of ideas and conformity pressures) are also present in naturalistic settings (Janis, 1982). And, most organizations have mechanisms (e.g., selection and socialization) that can heighten the effect of creativity-related variables over time (e.g., Chatman, 1991; Schneider, 1987). As a result, it may be reasonable to conclude that the effects of individualism-collectivism that are demonstrated in laboratory settings would have a parallel impact on people interacting in on-going organizations.

In drawing conclusions from this study it may also be useful to take note of the potency of the manipulation of individualism-collectivism. Because we experimentally manipulated the

cultural orientation of group members, one can question whether this manipulation fully tracked the range (and strength) of naturally acquired cultural values. At best, our manipulation altered the salience of individualism vs. collectivism. Since many individuals may hold a mixture of values on this dimension rather than a strict dichotomy of interests (Triandis, 1989), the manipulation may have brought to the fore those values that best fit individualism or collectivism. Although the manipulation of individualism-collectivism did produce statistically significant results, one might argue that even greater differences could be expected with intact groups representing cultures at opposite ends of this dimension (e.g., European Americans vs. Asian nationals).

Finally, it may be important to consider the match between individualism-collectivism and the setting in which creativity was assessed. Since collectivistic organizations make heavy use of teams in producing goods and services, it was logical to test the effects of collectivism on group behavior. Although there was somewhat less of an imperative for testing individualism in a group setting, it was necessary to test both individualism and collectivism within the same task environment. Because our group brainstorming task may have fit more closely with the ideology of collectivism than individualism, it could have been argued that collectivistic conditions would most likely show positive effects on creativity. Of course, the opposite pattern was found by our analyses. The results were more supportive of individualism than collectivism (at least when there were specific demands for creativity), even though the task may have been better suited to collective rather than individual behavior. In the future, researchers might consider experiments that fully cross both individualism-collectivism and the task environment (e.g., individual vs. group problem solving). In this way, one might track the relative influence of individualism-collectivism on both individual and group creativity.

## *Conclusion*

We began by noting an apparent shift away from individualistic values in work organizations to those reflecting a more collectivistic culture. Although many scholars have argued for the utility of such a shift, there has been relatively little study of its unintended or possible negative consequences. Our results suggest that collectivistic values may extinguish the spark necessary for creativity in groups. We also found that barriers to creativity in collectivistic groups cannot easily be surmounted by simple demands for creativity. Therefore, while individualistic groups may at times appear to be divisive and even unruly, such a cultural orientation may actually help groups meet the requirements of innovation in the workplace.

## References

- Amabile, T. (1983). The Social Psychology of Creativity: A Componential Conceptualization. Journal of Personality and Social Psychology, 45, 2, 357-376.
- Amabile, T.M. (1988). A model of creativity and innovation in organizations. In B.M. Staw & L.L. Cummings (Eds.) Research in Organizational Behavior, 10, 123-167. Greenwich, CT: JAI Press.
- Asch, S.E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. Psychological Monographs, 70 (9, whole no. 416).
- Azuma, H. (1994). Nihonjin no shitsuke to kokum [Discipline and Education in Japan]. Tokyo: Tokyo University Press.
- Bachnik, J.M. (1994). Introduction: Uchi/soto: Challenging our conceptualizations of self, social order, and language. In J.M. Bachnik, & C.J. Quinn, Jr. (Eds.), Situated Meanings (pp. 3-38). Princeton, N.J.: Princeton University Press.
- Barron F. & Harrington, D. (1981). Creativity, intelligence, and personality. In M. Rosenzweig & L. Porter (Eds.), Annual review of psychology (Vol.32, pp.439-476). Palo Alto, CA: Annual Reviews.
- Bond, R. & Smith, P.B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. Psychological Bulletin, 119, 1, 111-137.
- Brockner, J. (2003). Unpacking country effects: On the need to operationalize the psychological determinants of cross-national differences. *Research in Organizational Behavior*, (25), 333-367.
- Cambell, D.T. (1969). Blind variation and selective retention in creative thought as in other knowledge processes. Psychological Review, 67, 380-400.
- Chatman, J.A. (1991). Matching people and organizations: Selection and socialization in

- public accounting firms. Administrative Science Quarterly, 36, 459-484.
- Chatman, J. & Jehn, K. (1994). Assessing the relationship between industry characteristics and organizational culture: How different can you be? Academy of Management Journal, 37, 522-553.
- Chatman, J.A., Polzer, J.T., Barsade, S.G., & Neale, M.A. (1998). Being Different Yet Feeling similar: The influence of demographic composition and organizational culture on work processes and outcomes. Administrative Science Quarterly, 43, 749-780.
- Cohen, D. & Nisbett, R.E. (1994). Self-protection and the culture of honor: Explaining Southern violence. Personality and Social Psychology Bulletin, 20, 551-567.
- Cousins, S. (1989). Culture and selfhood in Japan and the U.S. Journal of Personality and Social Psychology, 56, 124-131.
- Davidson, A.R., Jaccard, J.J., Triandis, H.C., Morales, M.L. & Diaz-Guerrero, R. (1976). Cross-cultural model testing: Toward the solution of the etic-emic dilemma. International Journal of Psychology, 11, 1-13.
- Diehl, M. & Stroebe, W. (1987). Productivity Loss in Brainstorming Groups: Toward the Solution of a Riddle. Journal of Personality and Social Psychology, 53, 1, 497-509.
- Fiske, A.P., Kitayama, S., Markus, H.R., & Nisbett, R.E. (1998). The cultural matrix of social psychology. In: D.T. Gilbert, S.T. Fiske, & G. Lindzey (Eds.) The Handbook of Social Psychology, 4<sup>th</sup> edition (pp. 915-981).
- Flynn, F. & Chatman, J. (2001). Strong Cultures and Innovation: Oxymoron or

- Opportunity? In S. Cartwright, et.al. (Eds.) International Handbook of Organizational Culture and Climate, Sussex, John Wiley & Sons.
- Frost, P.J. & Egri, C.P. (1991). The political process of innovation. In B.M. Staw & L.L. Cummings (eds.), Research in Organizational Behavior, vol. 13, Greenwich, CN: JAI Press.
- Guilford, J.P. (1956). The structure of intellect. Psychological Bulletin, 33, 267-293.
- Helson, R. (1996). In search of the creative personality. Creativity Research Journal, 9, 295-306.
- Hong, Y., Chiu, C. Y., & Kung, M. (1997). Bringing culture out in front: Effects of cultural meaning system activation on social cognition. In K. Leung, U. Kim, S. Yamaguchi, & Y. Kashima (Eds.), Progress in Asian social psychology (Vol. 1, pp. 139-150) Singapore: John Wiley.
- Hong Y-Y, Morris MW, Chiu C-y, Benet-Martinez V. (2000). Multicultural minds: a dynamic constructivist approach to culture and cognition. American Psychologist, 55:709–720.
- Hong Y-Y, Benet-Martinez V, Chiu C-y, Morris M.W. (2003). Boundaries of cultural influence: construct activation as a mechanism for cultural differences in social perception. Journal of Cross-Cultural Psychology, 34: 453–464
- Ilgén, D.R. (1999). Teams imbedded in organizations. American Psychologist, 54 (2), 129-139.
- Ilgén, D., Major, D., Hollenbeck, J. & Seago, D. (1993). Team research in the 1990's. In M.M. Chemers, & R. Ayman, (Eds.), Leadership Theory and Research: Perspectives and Direction (pp. 245-270). San Diego, CA: Academic Press.

- Janis, I. L. (1982). Groupthink: Psychological studies of policy decisions and fiascos. Boston: Houghton Mifflin.
- Kagono, T.; Nonaka, I.; Sakaribara, K., and Okumura, A. 1985. Strategic vs. Evolutionary Management: A U.S. -Japan Comparison of Strategy and Organization. Amsterdam: North-Holland.
- Kanter, R.M. (1988). When a thousand flowers bloom: Structural, collective and social conditions for innovation in organizations. In B. Staw & L.L. Cummings (Eds.), Research in Organizational Behavior (vol. 10, pp. 169-211). Greenwich, CT: JAI Press.
- Katz, D. & Kahn, R. (1978). The Social Psychology of Organizations. New York: Wiley, 658-661.
- Katz, A.N. & Poag, J.R. (1979). Sex differences in instructions to “be creative” on divergent and non-divergent test scores. Journal of Personality, 47: 518-530.
- Kim, H. & Markus, H. R. (1999). Deviance or uniqueness, harmony or conformity: A cultural analysis. Journal of Personality and Social Psychology, 77, 785-800.
- Kitayama, S., Markus, H.R. & Lieberman, C. (1995). The collective construction of self-esteem: Implications for culture, self, and emotion. In J. Russell, J. Fernandez-Dols, T. Manstead, & J. Wellenkamp (Eds.), Everyday conceptions of emotion: An introduction to the psychology, anthropology and linguistics of emotion (pp. 523-550). Dordrecht, Netherlands: Kluwer.
- Kirton, M.J. (1976). Adaptors and innovators: A description and a measure. Journal of Applied Psychology, 61, 622-629.
- Larey, T. S., & Paulus, P. B. (1999). Group preference and convergent tendencies in small

- groups: A content analysis of brainstorming performance. *Creativity Research Journal*, 12, 175–184.
- Lehman, D.R., Chiu, C. & Schaller, M. (2004). Psychology and Culture. Annual Review of Psychology, 55: 689-714.
- Locke, E.A. & Latham, G.P. (1990). A Theory of Goal Setting and Task Performance. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E.A., Tirnauer, D., Roberson, Q., Goldman, B., Latham, M.E., & Weldon, E. (2001). The importance of the individual in an age of groupism. In M. Turner (Ed.), Groups at Work: Theory and Research (pp. 501-528). Mahway, NJ: Erlbaum.
- March, J.G. (1991). Exploration and exploitation in organizational learning. Organization Science, 2: 71-87.
- Markus, H. & Kitayama, S. (1991). Culture and self: Implications for cognition, emotion and motivation. Psychological Review, 98, 2, 224-253.
- Markus, H. & Kitayama, S. (1994). A collective fear of the collective: Implications for selves and theories of selves. Personality and Social Psychology Bulletin, 20, 5, 568-579.
- Mayer, R.E. (1992). Thinking, Problem Solving, Cognition. New York, NY: Worth Publishers.
- McGrath, J.E. (1997). Small group research, that once and future field: An interpretation of the past with an eye toward the future. Group Dynamics, 1 (1), 7-27.
- Moritz, M. (1984). The little kingdom: The private story of Apple Computer. New York: William Morrow & Co.
- Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. Journal of Personality and Social



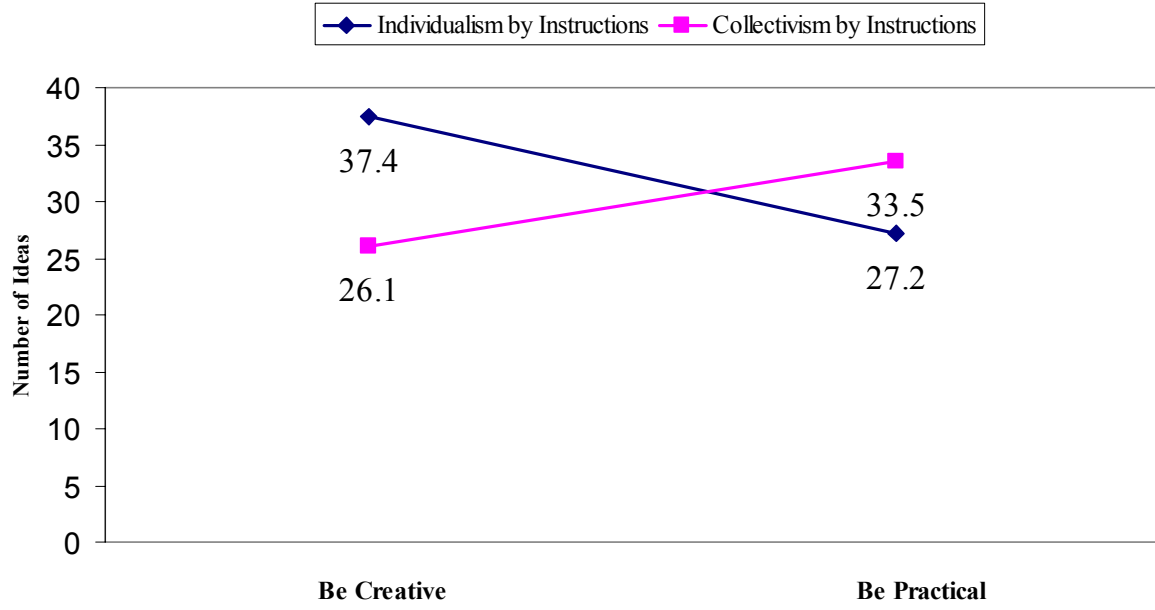
- Psychology, 67, 949-971.
- Moscovici, S. (1976). Social Influence and Social Change. London: Academic Press.
- Nemeth, C. (1985). Dissent, group processes and creativity. In E. Lawler (Ed.),  
Advances in Group Processes Theory and Research (57-75). Greenwich, CT: JAI Press.
- Nemeth, C.J. (1997). Managing innovation: When less is more. California Management Review, 40.
- Nemeth, C.J. & Kwan, J. (1985). Originality of word associations as a function of majority versus minority influence processes. Social Psychology Quarterly, 48, 277-282.
- Nemeth, C.J. & Staw, B.M. (1989). The tradeoffs of social control and innovation in small groups and organizations. In L. Berkowitz (ed.), Advances in experimental social psychology, vol. 22, 175-210. New York: Academic Press.
- Nemeth, C. & Wachtler, J. (1983). Creative problem solving as a result of majority vs. minority influence. European Journal of Social Psychology, 13, 45-55.
- O'Hara, L.A. & Sternberg, R.J. (2000). It doesn't hurt to ask: Effects of instructions to be creative, practical or analytical on essay writing performance and their interaction with student's thinking styles. Creativity Research Journal, vol. 13, no. 2, 197-210.
- O'Reilly, C. (1989). Corporations, culture, and commitment: motivation and social control in organizations. California Management Review, v31. 9-25
- O'Reilly C.A., & Chatman, J.A. (1996). Culture as Social Control: Corporations, Cults and Commitment. In L.L. Cummings and B.M Staw (Eds.) Research in Organizational Behavior, 18.
- Osborne, A.F. (1957). Applied Imagination. New York: Scribner.
- Ouchi, W. (1981). Theory Z: How American businesses can meet the Japanese

- challenge. Reading, Mass.: Addison-Wesley.
- Oyserman, D., Coon, H.M. & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. Psychological Bulletin, 128, 1, 3-72.
- Pascale, R.T. & Athos, A.G. (1981). The Art of Japanese Management. New York: Simon & Schuster.
- Paulus, P.B., Dzindolet, M.T., Poletes, G. & Camacho, L.M. (1993). Perception of performance in group brainstorming: The illusion of group productivity. Personality and Social Psychology Bulletin, 19, 78-89.
- Paulus, B. Yang, H.C. (2000). Idea generation in groups: A basis for creativity in organizations. Organizational Behavior and Human Decision Processes, 82, 1, 76-87.
- Pfeffer, J. (1994). The Human Equation. Boston, MA: Harvard Business School Press.
- Pfeffer, J. (1998). Competitive Advantage Through People: Unleashing the power of the workforce. Boston, MA: Harvard Business School Press.
- Salancik, G.R. & Conway, M. (1975). Attitude Inferences from Salient and Relevant Cognitive Content about Behavior. Journal of Personality and Social Psychology, 32, 5, 829-840.
- Schacter, S. (1951). Deviation, rejection and communication. Journal of Abnormal and Social Psychology, 46, 190-207.
- Schneider, B. (1987). The people make the place. Personnel Psychology, 14, 437-453.
- Schwarz, N. (1999). Self-reports: How the questions shape the answers. American Psychologist, 54: 93-105.
- Simonton, D. K. (1999a). Creativity as blind variation and selective retention: Is the

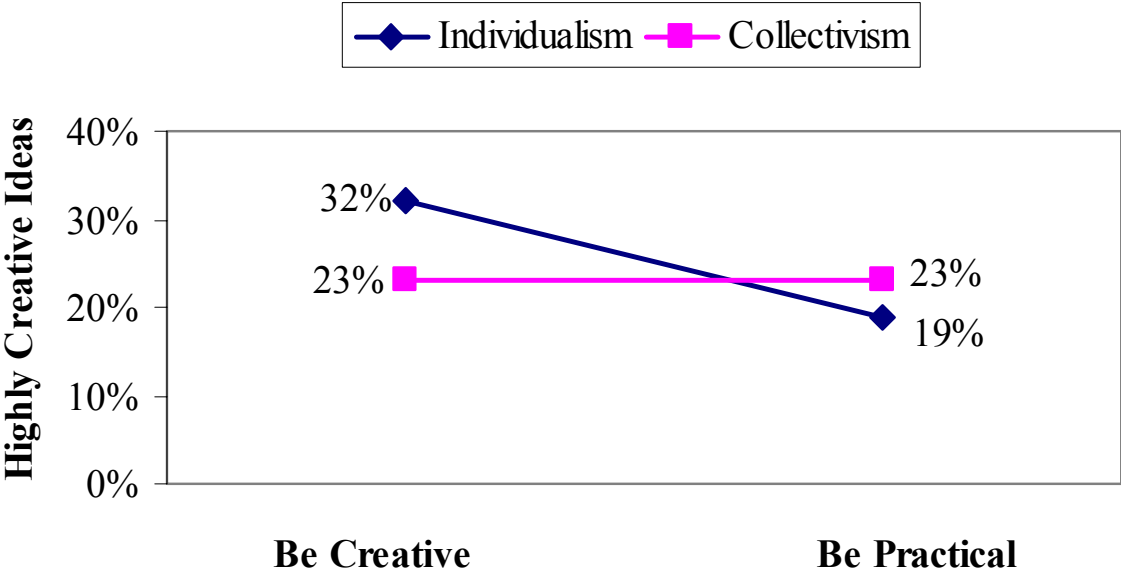
- creative process Darwinian? Psychological Inquiry, 10, 309-328.
- Staw, B.M (1995). Why No One Really Wants Creativity. In Creative Action in Organizations: Ivory Tower Visions & Real World Voices, C.M. Ford, & D.A. Gioia (Eds.) 161-172. Thousand Oaks, CA: Sage.
- Sternberg, R. J., Kaufman, J. C., & Pretz, J. E. (2002). The Creativity Conundrum: A Propulsion Model of Creative Contributions. Philadelphia, PA.
- Sutton, R.I. (2001). Weird Ideas that Work: 11 ½ Practices for Promoting, Managing and Sustaining Innovation. New York: Free Press.
- Sutton, R.I. & Hargadon, A. (1996). Brainstorming groups in context: Effectiveness in a product design firm. Administrative Science Quarterly, 41, 685-718.
- Triandis, H.C. (1989). The self and social behavior in differing cultural contexts. Psychological Review, 96, 3, 506-520.
- Triandis, H.C. (1994). Culture and Social Behavior. New York: McGraw-Hill.
- Triandis, H.C. (1996). The psychological measurement of cultural syndromes. American Psychologist, 51, 4, 407-415.
- Tushman, M.A. & O'Reilly, C.A. (2002). Winning Through Innovation: A Practical Guide to Leading Organizational Change and Renewal. Cambridge, MA: Harvard Business School Press.
- Wagner, J.A. (1995). Studies of individualism-collectivism: Effects of cooperation in groups. Academy of Management Journal, 38, 152-172.
- Wheeler, L., Reis, H.T., & Bond, M.H. (1989). Collectivism-individualism in everyday social life: The middle kingdom and the melting pot. Journal of Personality and Social Psychology, 57, 79-86.

Wink, P. (1997). Beyond ethnic differences: Contextualizing the influence of ethnicity on individualism and collectivism. Journal of Social Issues, 53, 329-349.

**Figure 1: Idea Generation by Condition**



**Figure 2: Highly Creative Ideas by Condition**



## Endnotes

---

<sup>1</sup> We included a variable that measured the percentage of the group who identified themselves as “Asian” as a covariate in all reported analyses. Because the covariate was not significant in any analysis, it was subsequently dropped from the analyses.

<sup>2</sup> These results hold when the total number of ideas generated by each group was included as a covariate. The covariate was not significant.