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Abstract

The literature on maintaining versus changing membership of groups has generally favored stable membership, not only for cohesion and morale but for performance via comfort and shared experiences. Extending such a notion to idea generation and brainstorming, one might expect that such stability of membership would similarly result in comfort and morale and consequently a willingness to "freewheel," to express ideas without undue concern for their value or reception. On the other hand, research on the stimulating properties of dissent, debate and diversity would argue for a change in membership in that it would provide access to differing views, it would lessen the impact of norms that hinder performance, and it could stimulate more divergent and creative thought. The present study investigated idea generation when membership was maintained versus completely changed. We predicted that maintaining membership would increase comfort and morale and also the *perception* of freedom and creativity but not necessarily creative behavior. Changing membership, we predicted, would not serve feelings of comfort or morale nor perceptions of freedom and creativity but would in fact result in more creative behavior, that is, an increase in the number and creativity of the ideas generated. These predictions were supported.

Creative Idea Generation: Harmony versus Stimulation

In the literatures on group process and the quality of performance, some research emphasizes factors that promote both morale and performance whereas other research points to a tension or "tradeoff" between factors that improve comfort, cohesion and morale and those that improve thought processes, stimulation and creativity. Demographic diversity is one such example where this tension exists. This research repeatedly shows the value of diversity for performance and creativity but, at the same time, finds a decrease in cohesion and morale of the group (Williams & O'Reilly, 1998 for a review; Jehn, Northcraft, & Neale, 1999).

Stable versus changing membership of the group is a research area where, by and large, stable membership has been found to increase morale and performance (Levine & Moreland, 1991) but the link to performance has received mix support, especially when performance involves idea generation (Choi & Thompson, 2005). Further, the available literature on the value of diversity, debate and dissent would suggest a tradeoff. Factors that promote comfort and morale may in fact deter divergent thought and creativity whereas dissent may stimulate creativity but at the expense of comfort and morale (Nemeth & Staw, 198). We will review each of these literatures in sequence and then draw on those findings to form hypotheses about the role of maintaining versus changing membership in groups attempting to generate creative solutions to problems.

Comfort and Performance: Implications of Stable Membership in Groups

Maintenance of stable membership of a group provides familiarity and shared experience which have been linked to high morale, better coordination and better performance. Liang, Moreland and Argote (1995), for example, link shared experience in training to better quality products. Other studies demonstrate that familiarity with the other members leads to less anxiety

and uncertainty (Kim, 1997; Levine & Moreland, 1991). Still other research finds that individuals familiar with one another are more likely to share unique information (Gruenfeld, Mannix, Williams, & Neale, 1996) which should improve performance (Gigone & Hastie, 1993; Stasser & Titus, 1985) and, in fact, Moreland, Argote and Krishnan (1998) provide some evidence in this regard.

By and large, the research shows that experience with members of the group not only makes one more familiar with them but more comfortable with them. People learn who is good at what; they are better at sharing information (Wittenbaum & Stasser, 1996) and repeated interaction provides a group memory that aids problem solving (Salas & Cannon-Bowers, 2001). Further, such comfort is evident in the willingness to express disagreement (Gruenfeld et al., 1996) which has been linked to better performance and idea generation (Nemeth, 1995)

The research evidence, however, is mixed. Kim (1997) finds that having both group and task experience leads to poorer performance than having either group or task experience. These conflicting findings suggest the need for a closer examination of familiarity, group experience and their effects on group outcomes.

Discomfort and Performance: Implications of Changing Membership in Groups

There has long been a dissenting voice in the literature on the value of comfort and cohesion for performance. Considering performance in terms of the quality of decision making, the classic work on groupthink (Janis, 1972), for example, found a negative relationship between cohesion and morale and effective decision making. In that work, familiarity and cohesion led to a "strain toward uniformity" which led to faulty decisions. In fact, the problem with such groups appears to be their tendency to actively discourage dissent and to promote a premature consensus which results in an inadequate consideration of the available information and alternatives and,

thus, poor decision making. Janis himself offered, as antidotes, the separation of the group into subgroups, bringing in outside experts, usage of techniques such as devil's advocate, all of which can be considered as advice to find and foster dissent (Janis, 1972).

Research on the expression of minority views has demonstrated the value of this "authentic dissent," not only for the thwarting of premature consensus or groupthink, but on its ability, *even if wrong*, to stimulate divergent and creative thinking (Nemeth, 1995, 2003). People exposed to dissent, though irritated and made less comfortable (Nemeth & Wachtler, 1983), consider more information on all sides of the issue, utilize multiple strategies, have improved performance and make better decisions (Nemeth, 1995; Gruenfeld, 1995; Van Dyne & Saavedra, 1996).

Work on the role playing technique of devil's advocate (Cosier, 1978; Schwenk, 1990; see generally, Katzenstein, 1996) provides evidence for the value of a designated role that criticizes the prevailing viewpoint—at least when compared to no dissent. However, recent evidence (Nemeth, Collins, Rogers, & Brown, 200; Nemeth, Brown, & Rogers, 2001) demonstrates that "authentic dissent" is far superior to role playing dissent (that is, the devil's advocate) for considering options and for generating creative solutions. While the devil's advocate technique tries to maintain morale while still criticizing the prevailing viewpoint, it does not stimulate divergent thinking and the generation of ideas whereas authentic dissent does provide such stimulation even though the dissenter is routinely disliked. An honest difference of views appears to provide the real conflict that stimulates thinking in divergent ways and finding creative solutions (Nemeth, 2003).

Research in organizational behavior provides additional evidence for such a contention. Constructive conflict, especially that which is issue or task oriented rather than interpersonal, can

benefit the quality of decisions and performance (Amason, 1996; Jehn, 1995; Jehn & Mannix, 2000). Further, Eisenhardt, Kahwajy and Bourgeois (1997) provide further evidence in their study of twelve top management teams, finding that the most successful are those who harness and profit from conflict.

Linking these conceptions to the issue of stable versus changing memberships, Levine, Choi and Moreland (2003) offer evidence that newcomers have the potential to increase innovation in groups. Studies by Ziller, Behringer and Goodchilds (1962) and, more recently, by Choi and Thompson (2005) provide evidence that the addition or replacement of a member can aid some elements of creative thought. In the Choi and Thompson study, there were two related tasks (one before and one after the replacement of a single member). In the first session, individuals were given fruits and asked to generate criteria for classification; in the second session, they were asked to give sorting criteria for vegetables. Performance was improved when a member was replaced, the premise being that there was an increase in the knowledge base which contributed to the usage of more categories.

Though the amount of research on the issue of changing membership is quite small, a consideration of the above studies suggests that the benefits of familiarity may be primarily evident in tasks that emphasize the learning of skills or the sharing of information. The Liang et al. (1995) study, for example, involved assembling a radio. When the task involved the generation of categories, there is some evidence that change—at least the replacement of one member—may improve performance (Choi & Thompson, 2005). This however is not a completely new composition as it retains the stability of the old group with a single replacement.

Promoting Creativity

If we consider situations where idea generation and creative solutions constitute performance, there is now considerable evidence that dissent stimulates divergent thinking as well as original thought (Nemeth & Kwan, 1985) and it stimulates the finding and detection of novel solutions to problems (Nemeth et al., 2004; Mucchi-Faina, Maass, & Volpato, 1991). Even where there is no dissent, the encouragement of debate—even criticism— has been found to increase idea generation in brainstorming, a finding that held for samples in both the United States and in France (Nemeth, Personnaz, Personnaz, & Goncalo, 2004).

Translating such findings to the issue of stable versus changing membership, one of the few studies that directly examined the relationship between experience and idea generation in a brainstorming setting was conducted by Paulus and Dzindolet (1993). However, the evidence did not favor experience nor the lack of it. It did demonstrate the importance of the norms that developed in the first session. People "matched" their performance to that of their group members. Thus, experience could enhance or hinder subsequent performance depending on whether performance in the first session was high or low.

The present study. Prior research tends to support the notion that one of the advantages of stable membership is that it promotes familiarity, comfort and morale. Such consequences, while important in their own right, can have advantages also for information sharing and, one might hypothesize, for a willingness to express disagreement. On the other hand, there is evidence that a change in membership, whether that be a temporary relocation of a member (Gruenfeld, Martorena, & Fan, 2000) or a replacement (Choi & Thompson, 2005) can improve performance. However, these studies show benefits when there is a direct relationship between the tasks and,

perhaps more importantly, they are settings in which the group remains primarily stable with the introduction of a single new member.

In the present study, we investigated the consequences of maintaining the same membership versus a complete change in membership for creative idea generation. We start with the hypothesis, as confirmed in previous studies, that the maintenance of membership will make individuals more comfortable and create higher morale. However, we would argue that it may be the lack of familiarity or changing membership that provides the stimulation for divergent thinking and idea generation.

Our reasoning is that stable membership, while aiding morale, may actually undermine idea generation. The comfort and cohesion of stable membership is likely to promote a type of convergent thinking as evidenced by groupthink. Research shows that cohesion, especially when defined in terms of mutual attraction, is an antecedent condition for premature judgment, a lack of consideration of innovative alternatives and poor decision making (Janis, 1972; Mullen, Anthony, Salas, & Driskell, 1994). Additionally, as we have argued elsewhere (Nemeth & Nemeth-Brown, 2003), people often confuse morale with creativity. Many subjects, after a brainstorming session, think they were creative even when their productivity does not permit such a conclusion (Paulus, 2000). Thus we would add the hypothesis that subjects in the stable membership condition might perceive their group to be higher in creativity while we predict the reverse for actual idea generation.

Changing membership, we hypothesize, may increase idea generation because it frees the individuals from the confines of the earlier group norms and the cohesion that has been developed. Additionally, new members may well stimulate forms of divergent thought, including

"divergent semantic networks" (Nijstad, Diehl, & Stroebe, 2003) which have been found to increase idea generation in brainstorming settings.

In this study, three individuals will brainstorm on a given issue (with a fourth recording the ideas generated). They will either then stay with the same group or will move to a completely new group to brainstorm on a second, unrelated issue. To summarize the hypotheses:

1. "Stable" membership groups should be higher in morale and comfort.

2. "Stable" membership groups will <u>perceive</u> that their groups were more creative.

3. "Changing" membership groups will actually be more creative.

   a. they will be higher in the number of ideas generated;

   b. they will be higher in the judged quality (creativity) of those ideas; and

   c. they will generate ideas across more categories, thus evidencing divergent thinking.

Method

One hundred and seventy-two female students from the subject pool of the Department of Psychology, University of California, Berkeley participated for course credit. Participants were run in groups of 4 persons (3 participants and 1 assigned recorder) totaling 43 groups. Two groups were removed due to failure to follow instructions, resulting in 164 participants comprising 41 groups of four persons.

Participants were randomly assigned to one of two conditions: the **"Same"** composition condition or the **"Change"** composition condition. Twelve subjects could sign up for each experimental session. Upon arrival, they were told that they were participating in a study on group interaction. They were then asked to read and sign a consent form. After signing the consent form, participants were separated into groups of four and ushered into three separate but

adjacent rooms. Each group was told that they would have 15 minutes to brainstorm on a given topic. The topics were counterbalanced. For Session 1, subjects were told that they would be coming up with solutions to the topic of 'How to decrease traffic congestion in the San Francisco Bay area' OR the topic of 'How to increase tourism in the San Francisco Bay area.'[1] Subjects were then given traditional brainstorming instructions as follows: "Aim for a large quantity of ideas; build upon one another's ideas; ideas can be wild; and group members should not criticize one another's ideas." The groups were also given a typed sheet listing these instructions. One individual chosen at random was asked to record the group's ideas and not participate in idea generation. The recorder's task was to list all the ideas expressed in the brainstorming session.

Upon completing the first brainstorming task, participants were instructed that they would be brainstorming on a second topic. The recorder was asked to remain and to act again as the recorder of ideas. The three participants in the "Same" condition were asked to remain in the same room with the same people. Those in the "Change" condition were asked to change rooms. One remained in the same room as for Task 1; the other two individuals each went to one of the two adjacent rooms. Thus, for the "Change" condition, the membership for those brainstorming on Task 2 involved completely new members.

For Session 2, participants were told that they would be brainstorming on another topic. Those who had brainstormed on tourism now were asked to brainstorm on traffic; those who had brainstormed on traffic now were asked to brainstorm on tourism. As in Task 1, all groups were told that they would have fifteen minutes to brainstorm on this second topic. They were also reminded of the brainstorming instructions. The participant who had been the recorder for the group in Task 1 was asked to retain that role and record the group's ideas and not participate in idea generation.

Upon completion of this second brainstorming task, participants were asked to complete a questionnaire that asked about moods and perceptions during the first and second brainstorming tasks. Specifically, participants were asked about their level of comfort, stimulation and creativity during both tasks and the perceived friendliness and morale of the group during both tasks. Following the questionnaire, participants were permitted to ask questions and were then debriefed and dismissed.

Results

The design consisted of retaining the same membership versus changing completely the membership of the brainstorming group with topic of tourism or traffic counterbalanced across the sessions. The primary dependent variables were the number of ideas generated in Session 1 and Session 2, the creativity of those ideas as assessed by two independent coders, evidence of divergent thinking as measured by number of categories of ideas, and the perceptions of mood, stimulation and creativity for both sessions. To test the hypotheses concerning the effects of change in composition on these variables, we conducted between-subjects Analyses of Variance. Topic did not differ significantly on any of the dependent measures and, in each of the analyses, we controlled for Task 1 topic (Tourism; Traffic).

Ideas Generated

Quantity. Quantity of ideas generated in Task 2 constituted the primary dependent variable. Since composition was not manipulated until after the first task was completed, we confirmed that there were no differences between conditions during Task 1 ($M_{same} = 24.43$; $M_{change} = 24.72$; $F_{2,40} = 0.12.$ns). For quantity of ideas in Task 2, groups that "changed" composition generated more ideas ($M = 28.44$) than did groups that retained the "Same" ($M = 23.04$) composition ($F_{2,40} = 4.83$, $p < .05$). We also calculated an ANOVA on ideas generated in

Task 2, controlling for ideas in Task 1. Again, the "Change" condition generated more ideas than did the "Same" condition (F $_{3, 40}$ = 5.24, p < .05).

Creativity of ideas. Ideas that were generated in the groups were also coded for creativity. Two undergraduate coders, blind to the experimental design and hypotheses, independently rated each group's overall creativity for Task 2 on a 5-point scale ranging from 1 = not creative to 5 = highly creative. Inter-rater reliability was quite high, with an alpha of 0.70. Mean creativity for Task 1 was 3.01 (sd = 0.05) and for Task 2 was 3.01 (sd = 0.10). Comparing experimental conditions, participants who "changed" composition generated marginally more creative ideas in Task 2 (M = 3.04) than did groups that remained in the "Same" (M = 2.99) group (F $_{2, 40}$ = 3.10, p < .10).

Diversity. To examine another aspect of creativity, namely divergent thought, we calculated the diversity of the groups' ideas. Following Nijstad, Stroebe, and Lodewijkx (2002) we calculated the number of different categories of ideas generated by each group in Task 2. Two undergraduate coders, blind to the experimental design and hypotheses, independently categorized each idea of Task 2 into one of six predetermined categories. Again, training consisted of two sessions where coders became familiarized with the coding and practiced on five sample groups. Inter-rater reliability was high, with an alpha of 0.70. Mean diversity for Task 2 was 4.52 (sd = 0.70). Comparing experimental conditions, groups that "changed" composition generated ideas in more categories of ideas in Task 2 (M = 4.83) than did groups that remained in the "Same" (M = 4.26) group (F 2, 41 = 7.01, p < .05).

Within-category fluency. We also coded groups' ideas for within-category fluency, which reflects the average number of ideas per category by dividing the number of ideas each group

generated in Task 2 by the number of categories the group generated in Task 2 (Nijstad et al., 2002). Conditions did not differ significantly on this dependent variable.

--------------Insert Table 1 about here--------------

Perceptions. Upon completion of Task 2, participants filled out a questionnaire regarding their perceptions during the first and second brainstorming tasks. Thus, participants directly compared Task 1 and Task 2 after completing both tasks. As a result, analyses were based on difference scores (Task 2-Task 1). We conducted factor analyses of the questionnaire items utilizing varimax rotation. Survey items that had factor loadings below .50 on each factor or loaded equally on more than one factor were excluded, resulting in 3 reliable scales, all with factor loadings above .50. These scales included "perceived creativity/freedom" ($\alpha = .64$ in Task 1 and $\alpha = .60$ in Task 2), "perceived stimulation" ($\alpha = .84$ in Task 1 and $\alpha = .88$ in Task 2), and "perceived friendliness" ($\alpha = .76$ in Task 1 and $\alpha = .86$ in Task 2).

Subjective creativity. The scale named "creativity/freedom" was composed of two survey items, both with factor loadings above .50. The items were "How creative did you feel during the brainstorming session?" and "How free did you feel to say something stupid?" On a scale from 1-10, our sample had a mean perceived creativity score of 6.79 (sd = 1.78) during Task 1 and 6.78 (sd = 1.66) during Task 2.

Subjects' "perceived creativity" increased more from Task 1 to Task 2 in the "Same" condition than in the "Change" condition (F 2, 121 = 9.36, p < .01). Further, the direction was different; those who maintained the "same" composition perceived their creativity as better during Task 2 than during Task 1 (M = 0.43) whereas those who "changed" composition perceived that their creativity had diminished from Task 1 to Task 2 (M = -0.59). We also analyzed these data at the group level and found similar results (F 2, 40 = 8.67, p < .01). Groups

that maintained the "same" composition perceived higher levels of creativity in Task 2 than in Task 1 (M = 0.45) whereas those who "changed" composition perceived that their creativity had diminished from Task 1 to Task 2 (M = -0.59).

Subjective stimulation. The "stimulation" factor consisted of seven survey items, all with factor loadings above .50. Examples of the items are "How stimulated did you feel during the brainstorming session?" and "How bored did you feel during the brainstorming session?" (this item was reversed) on a 10-point Likert scale (1 = very low to 10 = very high). Our sample had a mean stimulation score of 6.39 (sd = 1.63) during Task 1 and 6.15 (sd = 1.79) during Task 2.

Subjects' perception of "stimulation" showed a similar pattern to perceived creativity. Those who "changed" composition perceived that they became less stimulated in Task 2 (M = -0.54) than in Task 1 relative to those who remained with the "same" group (M = -0.03), these findings reaching marginal significance (F 2, 122 = 3.78, p < .10). We also analyzed these data at the group level. While the pattern was similar, the differences were not statistically significant.

Subjective friendliness. Perceived friendliness consisted of six survey items, all with factor loadings above .50. Sample items were "How friendly did you feel during the brainstorming session?," "How cooperative was the group?," and "How much did you like your group members?" Participants utilized a 10-point Likert scale (1 = very low to 10 = very high). Our sample had a mean friendliness score of 7.80 (sd = 1.48) during Task 1 and 7.77 (sd = 1.50) during Task 2.

Those who "changed" composition perceived that they became less friendly in Task 2 than in Task 1 (M = -0.33) relative to those who stayed in the "same" group (F 2, 122 = 6.01,

$p < .05$). The latter perceived they became more friendly in Task 2 than Task 1 (M = 0.21). We also analyzed these data at the group level and found similar results.

Groups that maintained the "same" composition perceived higher levels of friendliness in Task 2 than in Task 1 (M = 0.21) whereas those who "changed" composition perceived that friendliness had diminished from Task 1 to Task 2 (M = -0.30), these differences being statistically significant ($F_{2, 40} = 6.28$, $p < .05$).

Perceived comfort and morale. In addition to analyzing these three scales, we examined differences on the two items that did not load on any factor—perceived comfort and perceived morale—both of which were predicted to differentiate between conditions. For perceived comfort, our sample had a mean comfort score of 7.46 (sd = 2.00) during Task 1 and 7.85 (sd = 1.68) during Task 2.

Those who "changed" composition reported that they became less comfortable in Task 2 than in Task 1 (M = -0.04) relative to those who stayed in the "same" group ($F_{2, 122} = 6.03$, $p < .05$). The latter reported they became more comfortable in Task 2 than in Task 1 (M = 0.73). We also analyzed these data at the group level and found similar results. Groups that maintained the "same" composition reported higher levels of comfort in Task 2 than in Task 1 (M = 0.74) relative to those who "changed" composition (M = -0.01; $F_{2, 40} = 4.99$, $p < .05$).

For perceived morale, the mean for Task 1 was 6.67 (sd = 2.06). The mean for Task 2 was 6.40 (sd = 2.38). There were no significant differences between conditions.

-------Insert Table 2 about here---------

Discussion

We started with the hypothesis that retaining a stable membership from one brainstorming task to the next would foster comfort, morale and perceived friendliness, all of

which might contribute to a perception of creativity but do not necessarily result in actual creativity. The results support this contention, finding that stable membership increased comfort and perceived friendliness whereas changing membership decreased it. Further, the stable membership groups perceived their groups to be more creative whereas actual creativity showed a reverse pattern.

Our second set of hypotheses predicted that the groups who changed membership would manifest actual creativity, whether defined as number of ideas generated, the creativity of those ideas or the divergent thought manifested by those ideas. Consistent with this, the data show that the groups who changed membership from Task 1 to Task 2 generated significantly more ideas than those who remained with the stable membership from Task 1 to Task 2. Their ideas were marginally more creative, as judged by independent coders. Finally, their ideas spanned more categories of ideas. Thus, the "disconnect" between the perception of creativity (manifested by the "Same" condition) and the reality of creativity (manifested by the "Change" condition) is again demonstrated.

In prior studies, that "disconnect" was in the form of brainstorming groups who thought they were creative but did not manifest this in actual performance. In this context, it is not just that the perception and reality do not match. It is that comfort, cohesion and perceived friendliness not only do not necessarily aid performance and idea generation, but can have the opposite effect. While positive perceptions and feelings ensue from stable membership, the actual idea generation is thwarted relative to groups who change membership over time. The latter, while reporting less friendliness, comfort and perceived creativity, actually produce more ideas--and those ideas are more divergent in form and are judged as more creative.

The findings point to two important correctives in the literature. First, there is a tendency to assume that making groups cohesive, comfortable and friendly is a way to increase productivity and even innovation (Hackman, 1987; O'Reilly, Caldwell, & Barnett, 1989; Nemeth, 1997). To some extent, the "rule" of brainstorming that individuals should not criticize other group members' ideas was designed as a mechanism for increasing comfort (or lowering evaluation apprehension). Yet, this appears not to be an important element of increasing idea generation (Diehl & Stroebe, 1987). In fact, we have previously demonstrated that such cautions may inhibit idea generation relative to an encouragement of debate, including criticism (Nemeth et al., 2004). The current study underscores the theory that "change" and the introduction of new perspectives is more important than comfort, belonging and friendliness for idea generation and the creativity of those ideas.

A second point, as alluded to above, is that there is a substantial difference between perceived and actual creativity. A good deal of literature on creativity concentrates on individuals' perceptions of their own creativity, especially as enhanced or diminished by various management styles or corporate cultures (DeDreu & Devries, 1997; Amabile, Schatzel, Moneta, & Kramer, 2004; Nemeth, 1997). The findings from the present study underscore the fact that perceived creativity may have little to do with actual creativity. In this study, they operate in opposite directions. Those groups maintaining the "same" composition perceive they are more creative but are, in fact, less creative than groups who "change" composition. We suspect that people often confuse friendliness and morale with creativity. Our stable membership groups report friendliness and perceived creativity but much like the findings of Paulus et al. (2000), their perception is inconsistent with the reality of the quantity and the quality of the ideas that they generate.

While there are reasons to foster morale and perceived creativity, one needs to separate these elements from actual idea generation. Comfort and morale may be conducive to getting individuals to "own" the ideas and to be willing to implement them. It may also serve other social, motivational and coordination purposes. However, it does not appear to enhance actual idea production or the creativity of those ideas. Rather, change, a lack of comfort, and the exposure to differing views may be the vehicle for actual production of ideas and for stimulating the most creative ideas. Thus, managers should be cautioned against the "paradox of success" wherein they place individuals in groups on a new task based on who previously worked well together. Rather, teaming individuals who have not previously worked together may better benefit the creative process.

Finally, while a complete change in membership appears to have beneficial effects for brainstorming settings where the emphasis is on the quantity and creativity of ideas, it is conceivable that some tasks –for example those benefiting from transactive memory (Wegner, 1986)—might be better served by some kind of stability of membership where only one or some subset of members are "new" or "replaced" (Choi & Thompson, 2005; Gruenfeld et al., 2000). However, the present study is a reminder that the impetus for performance and the stimulation of creative thought bear a complicated relationship to cohesion and morale and are often better served by diversity and challenge.

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Footnote

1   In order to account for order effects, half of the groups brainstormed on tourism during the first task and on traffic during the second task, and the other half of the groups brainstormed on traffic during the first task and on tourism in the second task.

Table 1

Ideas Generated in Task 1 and Task 2

	Same Composition	Changed Composition
Task 1		
Quantity	24.43	24.72
Creativity	3.02	3.00
Task 2		
Quantity	23.04	28.44
Creativity	2.99	3.04

Table 2

Perceptions of the Group Process

	Same Composition	Changed Composition
Perceived creativity	0.43	-0.59
Perceived stimulation	-0.03	-0.54
Perceived friendliness	0.21	-0.33

Note. Difference scores between Task 1 and Task 2.