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ENHANCING TEAM CREATIVITY THROUGH PSYCHOLOGICAL SAFETY AND
P.A.S.S.

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ABSTRACT

Organizations consistently rely on teams of individuals to perform specific creative tasks, and the resulting innovation is critical for organizational success. While scholars have devoted attention to understanding the creative process and environmental factors at the individual level, it is important for employers to recognize the dynamics at play at the group level that can be harnessed to foster creative performance. Previous research suggests that both psychological safety and a moderate level of conflict can be beneficial for team creative work. The current study attempts to understand the group-level factors underlying creative success by implementing a new intervention called the P.A.S.S. (Partner Advocacy Support System) Technique. P.A.S.S. was developed to maximize the potential benefits of psychological safety and task conflict on group creativity. In this study, 250 participants were placed in groups of 3 to 4 members each, and teams were assessed on their creative performance. Findings indicated that psychological safety and the use of the P.A.S.S. technique in groups improved creative quality in the teams. This suggests that a climate-based intervention can be successful in enhancing creative performance in groups.

TABLE OF CONTENTS

List of Tables	iii
Acknowledgements.....	iv
Chapter 1 Introduction	1
Anonymity of Ideas and Creative Performance in Groups	2
Increase in Objective Evaluation of Creative Ideas	4
Partner Advocacy	5
The P.A.S.S. Technique	6
Psychological Safety and Creativity	7
Combined Effects of P.A.S.S. and Psychological Safety.....	7
Chapter 2 Method	9
Participants.....	9
Research Design.....	9
Procedure	9
Measures	12
Chapter 3 Results	13
Chapter 4 Discussion	17
Theoretical Implications	18
Practical Implications.....	18
Limitations	19
Future Research.....	20
Appendix A Task Instructions	22
Appendix B Measures.....	25
BIBLIOGRAPHY	26

LIST OF TABLES

Table 1: Descriptive Statistics, Correlations, and Reliabilities.....	15
Table 2: Summary of Multivariate ANOVA for Group Creative Performance Quality.....	16

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Chapter 1

Introduction

Organizations increasingly utilize teams to work on creative tasks. If properly managed, teams can produce creative outcomes that are more beneficial than individual performance because teams have the added benefit of manpower, expertise, and experience (Kurtzberg & Amabile, 2001). While much research has focused on creativity at the individual level, it is important to expand upon team-level creativity research to further understand how to encourage creativity at the team level. Specifically, group dynamics can affect the progress and success of creative ideas.

There are several group phenomena that may hinder creative performance such as group think, evaluation apprehension, and process loss (Kurtzberg & Amabile, 2001). People may not feel comfortable sharing ideas if they sense a judgmental environment with team members who will criticize their thoughts. Such social inhibition can be detrimental to creative output because the number of ideas shared is reduced (Paulus, 2000). Previous research has attempted to identify the necessary conditions for creativity, but there is still no clear answer for how to minimize problematic dynamics (Amabile, 1995). To increase creative idea generation in teams, we developed a new intervention that could limit harmful group conditions. More specific to the present study, we suggest that influencing the anonymity of ideas presented in teams, creating perspective-taking through partner advocacy, and increasing psychological safety will improve group creative performance.

Anonymity of Ideas and Creative Performance in Groups

When team members feel evaluation apprehension in expressing their creative ideas, they may be less likely to share them. One of the ways in which such problematic group dynamics can be reduced is through the anonymous exchange of ideas. Anonymity may benefit creativity in several ways. First, anonymity reduces perception of member differences through the elimination of individual identification (Sassenberg & Postmes, 2002). The deindividuation that results from the context of anonymity makes people less self-aware and less self-regulated, and thus more likely to take risks with their ideas.

Risk-taking in the idea generation stage of the creative process can lead to a more free flow expression of ideas and comments (Diener, 1980; Jessup & Tansik, 1991). Risk taking is a result of a decrease in evaluation apprehension, where individuals may feel less likely to hold back a creative idea if they know it is anonymous (Diehl & Stroebe, 1987). If ideas shared are evaluated based on content rather than the status of their originator, group members may be more likely to take risks with the information they share and consequently increase creative performance. Anonymity also leads to a more objective evaluation of ideas by others (Hiltz et al., 1989). Objective evaluation of creative ideas is essential for groups to attain the most relevant, novel, and high-quality solutions.

In addition to risk taking, anonymity can enhance team members' association with their team identity. The less one knows about other group members (i.e., the more anonymous they are), the more salient it is to view that group as a common entity working towards a common goal (Sassenberg & Postmes, 2002). When attention is drawn outward to the

group, the focus is placed on external cues and members are less likely to acknowledge the differences between one another (Diener et al., 1980). It is important for groups to have a sense of cohesion in order to properly communicate and effectively generate and evaluate creative ideas.

When there is a reduction in the perception of member differences due to anonymity of idea generation and evaluation, there will be less evaluation apprehension, pressure to conform, and fear of punishment for contributing an idea (Connolly et al., 1990). Self-censorship can occur during idea generation because of the social desirability bias, in which individuals alter their responses to appear more favorable by the rest of the group (Shalley et al., 2000). In contrast, the depersonalization that results from the anonymity of brainstorming and sharing ideas makes group members more confident in expressing less conventional thoughts (Sassenberg & Postmes, 2002). This confidence comes from the idea that group members feel immersed in the team and that they cannot be singled out by others and judged for their contributions during idea generation (Jessup & Tansik, 1991). The anonymous communication mode provides a platform for group interaction that will make individuals more comfortable and willing to share their ideas (Carte et al., 2007). Once group members realize that they will not be personally judged for their ideas, they will take more risks (i.e., present more radical and novel solutions) (Hiltz et al., 1989). In addition, anonymity should encourage the participation of shy group members and elicit expression of more unpopular and novel ideas (Connolly et al., 1990). Literature has also shown that anonymous groups generated more and better solutions to a creative problem-solving task than groups who were not in such a context (Connolly et al., 1990).

Increase in Objective Evaluation of Creative Ideas

Evaluation of ideas is an important aspect of creative thought, and thus ensuring evaluation accuracy is vital for ensuring creative success (Licuanan et al., 2007). Runco and colleagues found that mastering idea evaluation as a skill increases one's creative capacity (Runco & Chand, 1994, as cited in Dailey & Mumford, 2010). By introducing anonymity and deindividuation into the group dynamic, there is less personal attachment to ideas and this can ultimately increase the potential of the group's creativity (Carte et al., 2007). The elimination of personal attachment to creative ideas during a brainstorming session reduces the subjective biases that can occur during evaluation of those ideas (Carte et al., 2007). Anonymity allows for group members to focus on the content of the ideas themselves and not relate them to who is sharing those (Kahai et al., 2003). Purely focusing on idea content can help group members evaluate its creative aspects—quality, elegance, and originality—as well as how realistic it is within the confines of the given problem at hand (Dailey & Mumford, 2010). This allows team members to make better decisions about which new ideas to continue building on.

However, while anonymity may indirectly relieve conditions that inhibit creativity, other more directly supportive factors are needed to drive it forward. While increased participation doesn't necessarily guarantee that more creative ideas will be generated, it does lead to more information sharing and a greater expression of opinions and remarks (Carte et al., 2007). However, this increased ease of expression creates some potential tradeoffs for teams. Research has shown that groups generating ideas in anonymous conditions are more likely to have task conflict and are more uninhibited in

their negative comments (Jessup & Tansik, 1991). Thus, our intervention also focused on increasing psychological safety. In our study, we tested whether partner advocacy was a second necessary condition for maximizing creative potential in teams.

Partner Advocacy

Sharing the ideas of others on a team may enhance the perceived psychological safety of the group members and lead to more creative performance. When a person of a group acts as a champion for another member's ideas, there is a greater chance that all of the ideas will be shared because personal attachment to the ideas is reduced. Partner advocacy can be a useful tool to maximize creativity by increasing the number of ideas shared. When group members share their own ideas, riskier ideas are more likely to be withheld due to the fear of judgment and embarrassment. Alternatively, investing cognitive energy in understanding someone else's thoughts via assuming responsibility for them will facilitate information exchange and lead to a more comprehensive evaluation of those ideas (Hoever et al., 2012). Hoever and colleagues found that groups with diverse viewpoints who engaged in perspective taking had more creative success than those who did not (Hoever et al., 2012).

Understanding group dynamics that are related to creative success is necessary, however it is important to bear in mind the practical implications of such knowledge. Research has indicated certain environmental factors that are important for creativity, however managers and supervisors in organizations may not always incorporate them in a creative task. By creating a structured task where both anonymity and partner advocacy

are required, team members may be more likely to share more ideas and evaluate them more openly. Currently, there is no known team intervention that can effectively capture the positive effects of anonymity and perspective taking on group creative performance. The P.A.S.S. technique was developed as an attempt to harness those dynamics.

The P.A.S.S. Technique

The P.A.S.S. (Partner Advocacy Support System) Technique is a structured form of idea sharing where members are asked to advocate for others' anonymous ideas. Team members are instructed to first develop ideas individually. Next, the team members anonymously exchange their ideas, and teammates are responsible for presenting the list of ideas to the group. The purpose of the anonymous exchange is to reduce any biases or self-censorship that may occur if an individual presented his or her own ideas. The P.A.S.S. technique maximizes the number of ideas shared and information elaboration. By advocating for their team member's ideas instead of their own, groups may be more likely to generate creative outputs.

Hypothesis 1: The use of the P.A.S.S. technique in groups will be positively related to team creativity.

However, the PASS system alone may not be as effective in teams where team dynamics are not conducive to sharing ideas. Therefore, we suggest that psychological safety is another important factor in team creative performance

Psychological Safety and Creativity

The expression of creative ideas comes with inherent social risks, and the perception of these risks can be mitigated through psychological safety. Psychological safety is typically viewed as an environment that is perceived by group members as interpersonally non-threatening (Burningham & West, 1995). In other words, people feel safe in their interactions with their fellow team members. In a study conducted by Connolly et al. (1990), results showed that groups with a more supportive evaluative tone generated more creative ideas than groups who were more critical. People are more likely to participate in the decision-making process and become active group members when they perceive their environment as interpersonally non-threatening (Burningham & West, 1995). We propose that teams who have members that feel safe in sharing their ideas with others will be more likely to have higher creative performance (Burningham & West, 1995). Psychological safety facilitates social interaction and information sharing because people feel comfortable in the group setting and can lead to greater risk-taking with ideas.

Hypothesis 2: Psychological safety in groups will be positively related to team creativity.

Combined Effects of P.A.S.S. and Psychological Safety

Integrating diverse viewpoints via the P.A.S.S. method can encourage and reinforce best practices in group communication. According to Hoever et al. (2012), diversity in perspectives can facilitate social interaction, perhaps due to the result of reduced stereotyping (Galinsky & Moskowitz, 2000) and encouragement of cooperative

behavior (Parker & Axtell, 2001). Through taking another person's perspective, team members may be less likely to stereotype one another and more likely to find the value in others' ideas (Hoever et al., 2012). Furthermore, possession of another set of ideas may encourage integration of the group's ideas and heighten cooperation to perform at a higher standard on the creative task (Hoever et al., 2012). We propose that combining the positive effects of psychological safety with the anonymity and advocacy that results from use of the P.A.S.S. method will have the highest impact on enhancing creativity. Thus, groups that use the PASS system within a psychologically safe environment would potentially have the greatest chances of creative performance.

Hypothesis 3: Teams that have both high psychological safety and who use the P.A.S.S. technique will have the highest levels of creative performance.

Chapter 2

Method

Participants

This study relied on a sample of 250 participants in 65 groups of 3 to 4 people each. They were recruited from the psychology department subject pool at a large northeastern university. All participants were compensated with class credit for completing the study. The students averaged 19.61 years of age. The participants were 68% female ($n = 170$) and 32% male ($n = 80$).

Research Design

The present study was a 2 (P.A.S.S. or no-P.A.S.S.) by 2 (high psychological safety or low psychological safety) between-subjects design. Subjects worked in teams of three or four. All teams were randomly assigned to either the experimental or control condition for each manipulation.

Procedure

The experimenter provided a brief introduction to the study and participants were instructed to fill out a pre-task questionnaire on their computers. Upon completion of the survey, the participants were then exposed to one of two manipulations: one involving the

level of participative safety, the second involving the presence of perspective taking (P.A.S.S.).

Each manipulation had two different conditions, participative safety and perspective taking. In the high participative safety condition, participants were told that they would be given the chance to evaluate their teammates. In addition, participants were shown a one-minute video created by the experimenters that demonstrated an example work team working on a brainstorming creative task with a climate of high participative safety. The experimenter then told participants after watching the videos that either conflict (low participative safety) or collaboration (high participative safety) is essential to creativity.

In contrast, the low participative safety condition used the word “critique” in the task instructions and the video shown demonstrated a work team in a low participative safety climate. Afterwards, participants were instructed that “Although it seems counterproductive to act toward your teammates in this fashion, creativity research actually shows that conflict is beneficial to creativity.” For further information on the task instructions, see Appendix A.

The participants were then given an overview of the task. There were three main phases: Individual Idea Generation, Group Idea Evaluation, and Final Idea Development. Before the first phase began, they were instructed to create an office game that could be sold for \$20 or less. They were also told by the experimenter that they would have to create a short commercial that would be videotaped at the end of the task phases. In the individual idea generation phase, the group of participants were instructed by the

experimenter to generate ideas for the task individually on a Microsoft Word document for a total of five minutes.

The second phase of the study was the idea evaluation stage. To prepare for the group discussion, participants were given the chance to prepare and share their ideas. In the perspective taking condition, participants received another team member's ideas on a USB drive to read over for one minute. The experimenter related to participants that they would be responsible for learning and presenting all of the ideas given to them. In the non-perspective taking condition, participants read over their own ideas before sharing them with the team. Upon completion of presentation preparation, the group members were given four minutes to share all of their ideas with the other participants.

The participants were told that they would have to "evaluate" (high participative safety condition) or "critique" (low participative safety condition) each other's ideas for the office game. To reinforce the participative safety conditions, the example videos played earlier were shown again to the participants. After the evaluation stage was complete, the team was given fifteen minutes to choose and develop a final idea for the office game. They were instructed to be as creative as possible. The group created a Final Product Sheet with a drawing and written description of the game. The team had twenty minutes to develop a five-minute pitch for the game. The pitch was videotaped and later independently coded by a team of three raters upon completion of the study. The participants completed a final post-task questionnaire and were debriefed.

Once all of the data was collected, work began to code the individual ideas, final product sheets, and group pitch videos. Three independent coders were chosen, all undergraduate Industrial-Organizational Psychology students with experience in

conducting lab studies. These raters were chosen based on their lack of familiarity with the study's conditions and hypotheses. Each of the coders participated in several hours of coder training and used benchmarks for evaluating the team creative performance.

Measures

Participative Safety. Participative safety was assessed using eight items from the Team Climate Inventory developed by Anderson and West (1998). Items from the scale are measured on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Sample items include, "Members of this team feel understood and accepted by each other," and "Every team member's view is listened to, even if it is the minority."

Creative Performance. Creative performance was assessed by measuring idea quality, originality, and elegance. Individual idea sheets, final idea sheets, and group videos were coded for these three creative performance variables. Quality was defined as the extent to which the ideas were logical, complete, and coherent. Originality was defined as the extent to which the ideas were unexpected, unique and elaborate. Elegance was defined as the extent to which the ideas were focused, fit well together, and used minimal elements to operate. The inter-rater reliabilities for quality ($\alpha = 0.880$ for individual idea sheets; $\alpha = 0.816$ for final idea sheets; $\alpha = 0.852$ for group videos), originality ($\alpha = 0.831$ for individual idea sheets, 0.816 for final idea sheets; $\alpha = 0.810$ for group videos), and elegance ($\alpha = 0.808$ for the individual idea sheets; $\alpha = 0.732$ for the final idea sheets; $\alpha = 0.504$ for the group videos) suggest that ratings had acceptable levels of rater agreement across the three creative performance dimensions.

Chapter 3

Results

Means, standard deviations, and internal consistency reliability estimates for study variables appear in Table 1. We used a univariate ANOVA to test the effect of our PASS and Psychological Safety manipulations on the team's creative performance (see Table 2). Hypothesis 1 predicted that psychological safety in groups would be positively related to team creativity. Our results supported this hypothesis, and psychological safety had a significant main effect on creative quality of the group solutions ($F(1, 68) = 8.24, p \leq .05$).

Hypothesis 2 predicted that the use of the P.A.S.S. technique in groups would be positively related to team creativity. We found that there was a significant main effect for P.A.S.S. on creative quality of the group solutions ($F(1, 68) = 10.69, p \leq .05$).

Hypothesis 3 predicted that teams in the condition that had both high psychological safety and used the P.A.S.S. technique would be rated highest on creativity relative to all other conditions. Although the interaction was approaching significance, ($F(1, 68) = 3.45, p = .06$), we could not conclude that the presence of both was necessary. However, the mean trends suggest that the high psychological safety and PASS condition had the highest quality of creative solutions ($M=3.80, SD=.19$), followed by high safety and no PASS ($M=2.95, SD=.17$), PASS and low safety ($M=2.89, SD=.18$), and finally low PASS and low safety ($M=2.71, SD=.17$).

Overall, these results suggest that both partner advocacy and psychological safety can have a positive influence on creative performance. Clearly, both the general group environment as well as the support for an idea by another team member results in more creative solutions for the group.

Table 1: Descriptive Statistics, Correlations, and Reliabilities

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Gender	1.68	.468	-				
2. Age	18.85	1.582	-.198	-			
3. P.A.S.S.	1.54	.50	-.161	-.125	-		
4. Psychological Safety	1.52	.50	.111	.040	-.018	-	
5. Group Creative Performance Quality	3.05	.83	.127	.057	-.295	-.334	(.82)

Note: Gender was coded as 1=male, 2=female; P.A.S.S. condition was coded as 1=P.A.S.S., 2=No P.A.S.S.; Psychological Safety condition was coded as 1 = High psychological safety, 2 = Low psychological safety; Creative Quality was coded by raters on a 5-point rating scale. All correlations above an absolute value of .09 significant at $p \leq .05$. $N = 69$. Reliabilities are presented along the diagonal in parentheses

Table 2: Summary of Multivariate ANOVA for Group Creative Performance Quality

Group Creative Performance Quality				
	<i>F</i>	<i>Df</i>	<i>P</i>	η^2
<i>Main Effects</i>				
P.A.S.S.	10.69	1, 68	.00	.14
Psychological Safety	8.24	1, 68	.01	.11
<i>Interaction</i>				
P.A.S.S. * Psych Safety	3.45	1, 68	.07	.05

Note: F = F-ratio, df = degrees of freedom, p = significance level, η^2 = partial eta squared effect size

Chapter 4

Discussion

The present study explored the effects of group-level factors such as psychological safety and perspective taking on team creativity using a newly developed intervention called P.A.S.S. Overall, the results of the study show that psychological safety and anonymity during a creative task to positively impact creative performance.

This study had several important findings. From the previous literature, psychological safety has been proven to influence creative potential in teams and is vital for creative quality. Results of the study supported hypothesis 1, which predicted that psychological safety in groups would be positively related to team creative performance. The researchers also wanted to study the effects of the new P.A.S.S. intervention on team creativity. P.A.S.S. was created to capture the positive impact on anonymity, perspective taking, and partner advocacy in idea generation in order to help teams develop creative ideas. The P.A.S.S. method involved team members anonymously trading their ideas with others in the group and then were responsible for presenting those ideas to the team. The anonymity in this scenario would allow for a reduction in stereotyping, self-censorship, and evaluation apprehension. Findings indicated support for hypothesis 2, which asserted that teams that used the P.A.S.S. intervention during the idea generation and evaluation phases of the creative process would be rated higher on creativity than groups that did not use the intervention. Lastly, it was important to determine if the combined effects of

psychological safety and P.A.S.S. had a stronger impact, if at all, on team creativity than the two conditions by themselves. The results of the study found an overall positive trend for hypothesis 3, which predicted that teams in conditions that had both the psychological safety manipulation and the P.A.S.S. technique would rate higher on creativity than all the other conditions. However, although the interaction was approaching significance, substantial conclusions from the study in relation to hypothesis 3 cannot be made.

Theoretical Implications

The findings from this study demonstrate the usefulness of anonymity in brainstorming and idea evaluation. Much of the scientific literature in the past has separated anonymity in social contexts from the world of creativity, however we hope that this study can act as a foundation for continuing to research those topics together in addition to other possible creativity interventions. The study also supported the importance of using more than one rating for creative performance (i.e., quality, originality, and elegance) enabled specific information to be gleaned from the results that may not have been interpretable if there was only one overall creative performance rating (Lovelace & Hunter, 2013).

Practical Implications

First, the main effects for creative performance in this study indicate that the P.A.S.S. technique is a viable method for eliciting successful creativity in teams. Little research on creativity emphasizes the structure of the idea generation task itself, however

we note from that findings of this study that by asking team members to advocate for someone else's ideas, we see greater creativity in a group. Based on the increase in creative performance in groups who used the P.A.S.S. method and had psychological safety, supervisors and managers of creative task forces can implement the technique and supportive conditions to enhance creativity.

Limitations

We note a few limitations of the current study. Firstly, the younger age and low participant diversity can make the findings difficult to generalize to organizational settings. This study solely relied on undergraduate students from a subject pool, thus some may argue that the results of the study may not generalize to organizational settings which comprise of work teams of older more experienced employees. Organizational employees are under different stressors than subject pool participants—they have both greater punishments for deviating from the norm and greater rewards for coming up with the next great invention. Additionally, the role managers and supervisors possess in organizations may have other influences on the creative success of teams. It may also be difficult for ideas to stay anonymous in organizations in which employees are well acquainted with one another. Researchers and practitioners should be cognizant of differences such as these that exist between participants in experimental settings and employees in organizations. The P.A.S.S. technique should be used in future studies in other settings with a variety of task types to determine the most effective way the method should be used.

A second limitation is the short-term nature of the study. Creativity researchers should try to replicate the results in a longitudinal study. Often in organizational settings, work teams are established entities with members who are well-acquainted with one another. Typically creative task forces in organizations have worked with their team members before and are comfortable working with them. The participants of this study were only together for a short period of time and were not well-acquainted with one another; the short time frame of the task could have affected the group dynamics. A longitudinal study would help clarify if prior experience working with that group at all impacts creative performance.

Future Research

Dynamics at the group level are complex to understand, however attempts to eliminate factors that are detrimental to creativity and harness those that can enhance it are of vital use to organizations who rely on creative teams. This study implemented a new method, P.A.S.S., which can be used by groups who seek to become more creative in their endeavors. It is important to note, though, that the P.A.S.S. method needs to be tested again in future research studies to further establish its credibility. Although we concede that further research and development on the P.A.S.S. technique is needed, we believe this study is indicative of its potential as a tool that can be used by organizations to enhance team creativity.

More specifically, future research focus on how performance is affected by time constraints, personality variables, and task type. Previous research has indicated that the more time pressure people feel, the less likely they will be able to think creatively (Amabile et al., 2002). As aforementioned, the teams in this study were comprised of undergraduate students who worked together on the task for a brief period of time. Creative performance may be different over a longer period of time. Future research could conduct longitudinal studies to look at how time constraint is a variable. Additionally, personality is related to creative capacity and more research can determine how certain personality variables are related to success of using the P.A.S.S. method.

Appendix A

Task Instructions

In many organizations, performance evaluations are used in the feedback process. During the study today, you will be given the chance to [evaluate/critique] your teammates. In one moment, you will watch a video that shows the ideal way to give feedback. Based on scientific research, this video shows the team feedback method that has been proven to be the most effective. Please pay close attention- we will require all of you to [evaluate/critique] each other in this fashion during the study. This is a short one-minute sample of what you will be expected to do for 4 minutes. Can everyone see the computer screen? Please pay attention to the feedback strategies of the team members in the video.

[Participants were shown appropriate sample video according to what condition they were in]

[Low Safety Conditions:] Although it seems counterproductive to act toward your teammates in this fashion, creativity research actually shows that conflict is beneficial to creativity. When it comes time to critique your teammates later in the study, please try to replicate the video's method as closely as possible.

[High Safety Conditions:] Again, creativity research shows that this method is beneficial to creativity. When it comes time to evaluate your teammates later in the study, please try to replicate the video's method as closely as possible.

Now that you are aware of how to [evaluate/critique] your teammates, we'll give you a brief overview of the task you'll be completing today.

Your task today is to develop a game that could be played in the office. The game will ultimately be sold for \$20 or less. Your team will have to make a commercial describing this game, and the commercial will be videotaped.

Individual Idea Generation Phase

In this phase, you will be recording your ideas. You will have five minutes to type as many ideas as you can in a Microsoft word document. No idea is too weird or too silly; the goal is simply to type as many ideas as you can. After typing your ideas, please use the rest of your time to type details about them. These details should be specific enough in content that anyone could read the ideas and understand them. Pull up the Microsoft word window on your laptop. Feel free to go back and forth between the word document and the online survey throughout this study.

[Pass Condition:] You now have a list of ideas that is not your own. For the next phase you will be in charge of presenting each idea on the list to the rest of the group. You will have one minute to read over this list and familiarize yourself with each idea. Make sure you give yourself enough time to thoroughly understand each idea on your new list. You may add on to the ideas in the word document on your screen to help when you are presenting and explaining them. Please do not talk during this phase.

[Control Condition:] Please refer to the list of ideas on your computer. For the next phase, you will be in charge of presenting all of your ideas to the rest of the group.

You will have 1 minute to read over your list and prepare to present your ideas to the rest of the group. You may add on to the ideas in the word document on your screen to help when you are presenting and explaining them. Please do not talk during this phase.

Appendix B

Measures

Intragroup Conflict Scale from Jehn (1995)

Task Conflict ($\alpha = .860$)

1. Members of my team often disagree about opinions regarding the work being done.
2. There frequently are conflicts about ideas in my team.
3. There is a lot of conflict about the work I do in my team.
4. There are differences of opinion within my team.

Relationship Conflict ($\alpha = .912$)

1. There is friction among members in my team.
2. There are personality conflicts among members in my team.
3. There is tension among members in my team.

Participative Safety Scale ($\alpha = .901$) from Anderson and West (1998)

1. Team members generally share information, rather than keeping it to themselves.
2. Members of this team have a “we are in it together” attitude.
3. Team members all influence each other with regard to our task.
4. Team members keep each other informed about work-related issues in the team.
5. Members of this team feel understood and accepted by each other.
6. Every team member’s view is listened to, even if it is the minority.
7. There are real attempts to share information throughout the team.
8. There is a lot of give and take within the team.

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Education

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Honors and Awards

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Association Memberships/Activities

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Professional Presentations

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Research Experience

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