Goal orientation-creativity relationship: openness to experience as a moderator

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GOAL ORIENTATION-CREATIVITY RELATIONSHIP:
OPENNESS TO EXPERIENCE AS A MODERATOR

A Thesis
Presented to
The Faculty of the Department of Psychology
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Maria Diana D. Borlongan
May 2008
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ABSTRACT

GOAL ORIENTATION-CREATIVITY RELATIONSHIP: OPENNESS TO EXPERIENCE AS A MODERATOR

by Maria Diana D. Borlongan

Creativity enables companies to survive in the fast changing business environment (Amabile, 1988, George & Zhou, 2001). To strengthen creativity, it is crucial to understand the different factors that relate to creativity. However, no research has studied the relationship of goal orientation to creativity. The present study hypothesized that learning goal orientation would be positively related to creativity; while proving goal orientation and avoiding goal orientation would be negatively related to creativity. Research questions were asked to study the moderating effect of openness to experience. Archival data (N=108) were collected from three non-profit organizations. It was found that learning goal orientation was positively related to creativity, and avoiding goal orientation was negatively related to creativity. Furthermore, it was found that the level of openness to experience is irrelevant if individuals have either learning or avoiding goal orientation. However, openness to experience should be considered for individuals who have a proving goal orientation.
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I dedicate this manuscript to my family, for all the support and love that they have given me. And to Matt, who is my rock.
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INTRODUCTION

At present, innovation and ongoing successful change have become crucial for organizations to survive in the fast changing business environment (Amabile, 1988, George & Zhou, 2001). Moreover, to be effective and to be competitive, companies have to search for ways in which to maximize creativity in their work force (Tierny, Farmer, & Graen, 1999, George & Zhou, 2001). One way of identifying those with creative potential is to understand different characteristics related to creativity. However, no research has been conducted to study the relationship of goal orientation to creativity. However, it has been indirectly implied that by considering goal orientation in personnel decision making, organizations will be able to find employees who are creative (Vandewalle, 2001). The overall purpose of the current research is to examine the relationship of goal orientation to creativity and to further add knowledge to the relationship of openness to experience and creativity.

The remaining part of this chapter will present existing efforts done in the past regarding the three constructs that are to be studied: creativity, goal orientation, and openness to experience. The review will also present a summary and critique of existing literature, followed by a discussion of the specific hypotheses to be addressed in the present study.

The Nature of Creativity

Research on creativity has resulted in a wide-range of definitions of the concept, from being a characteristic of a person, to being a process (Amabile, 1988, Oldham &
Cummings, 1996). However, a number of researchers have focused on creativity as being the product or outcome of a product development process (Oldham and Cummings, 1996; Amabile, 1983; Shalley, 1991; Woodman et al., 1993; Zaltman, Duncan, & Holbeck, 1973). This research defines creative performance as products, ideas, or procedures that meet two critical conditions: “(1) they are novel or original which involved either a significant reinvention of the present resources or a completely new material, which (2) are potentially relevant for, or useful to, an organization” (Oldham & Cummings, 1996, p. 608).

**External and internal factors related to creativity.** Due to the attention that is being given to creativity, numerous studies have been conducted to broaden an understanding of creativity. Most research has looked into different factors that promote creative ideas within organizations. Studies have shown that there are external factors that affect employees’ creative performance. For example, work and non-work creativity support have been found to have independent contributions to creative performance (Madjar, Oldham, & Pratt, 2002). Madjar, Oldham, and Pratt’s (2002) findings were consistent with earlier research that work support is positively correlated to creative performance. It has also been found that individuals’ family members and friends contributed to their creativity which was found to have more contribution to creativity at work, compared to the support from others who were not family members and friends (Madjar, et. al, 2002). Another research study has looked into job nature and creativity. Oldham and Cummings
(1996) showed that employees who worked in complex, challenging jobs, and were given autonomy were found to produce the most creative work.

Other studies have also shown the relationship of internal factors to creativity such as cognitive and personality traits and motivation. Cognitive abilities such as divergent thinking have been established predictors of creativity (McCrae, 1987; Scratchley & Hakstian, 2001). Also, personality traits, specifically the Five-Factor model of personality, have been found to be linked to creativity (George & Zhou, 2001; McCrae, 1987; Scratchley & Hakstian, 2001). Extraversion and openness to experience were found to be positively related to creativity, thus, people who are high on creativity are more sociable and open to new experiences (Kelly, 2006). However, it has been found that people who are high on conscientiousness are low in creativity, specifically in situations where supervisors are engaged in close monitoring and coworkers are not supportive of creative behavior (George & Zhou, 2001). In general, creative people have been generally described as “self-confident, independent, attracted to complexity, tolerant of ambiguity, persistent, and intuitive” (Osland, Kolb, Rubin, & Turner, 2007, p. 320).

Motivation is another factor that is considered to be related to creativity. Two types of motivation, intrinsic and extrinsic have been linked to creativity (Cooper & Jayatilaka, 2006). Individuals who have intrinsic motivation are found to have a greater disposition for creativity, for they are more likely to be curious, cognitively flexible, persistent, and take risks (Osland, et. al, 2007), thus, there is a greater chance that they will exert effort in exploring the problem and finding creative solutions (Cooper & Jayatilaka, 2006;
Hennessey, 2000; Staw, 1990; Woodman et al., 1993). Individuals who have extrinsic motivation, on the other hand, are less likely to be predisposed to creativity because they focus on rewards rather than the task at hand (Cooper & Jayatilaka, 2006; Amabile, 1996).

Though the relationship of certain external and internal factors to creativity has been established, there are still some questions left unanswered. Similar to creativity, goal orientation has also received attention in research. It has been suggested by Vandewalle (2001) that studying the relationship of goal orientation, specifically, learning goal orientation and creativity has value in employee selection process, however, no research to study this relationship has been conducted.

The Nature of Goal Orientation

Goal orientation is defined as an individual’s approach to achievement settings based on their goal preferences (Elliott & Dweck, 1988). Carol Dweck is considered a prominent researcher on goal orientation, initiating her research in the education setting. Together with Diener, Dweck began her work studying children’s responses to failure, whether children had a helpless or mastery-oriented response pattern (Deiner & Dweck, 1978). Deiner and Dweck observed that children with a helpless response pattern credited their failure to their lack of ability, showed negative affect, and their performance deteriorated. On the other hand, children with mastery-oriented response patterns responded to failure with solution-oriented self-instructions, maintained a positive affect, and had an increase in their performance. However, the question why
children differed in their reactions to failure was left unanswered. This then led to
Dweck’s findings that helpless and mastery-oriented children are driven by different
goals in achievement situations.

Elliott and Dweck (1988) proposed that there are two types of goals that people adhere
to in achievement situations: performance goals and learning goals. Individuals with
performance goals give much more importance to maintaining positive judgments of their
abilities, and avoiding negative judgments (Elliott & Dweck, 1988). However, those who
are driven by learning goals focus on improving their abilities and promote a mastery-
oriented response pattern. Later on, these two types of goals were developed into two
factors for goal orientation: (a) a learning goal orientation, which promotes development
of abilities through challenging situations; and (b) a performance goal orientation which
reinforces one’s abilities by seeking positive judgments and avoiding negative feedback
(Vandewalle, 2001). However, more current research has found that it was better to
define goal orientation into three distinct dimensions: learning goal orientation, proving
goal orientation, and avoiding goal orientation (Vandewalle, 2001). These dimensions
are described below.

Learning goal orientation. Vandewalle (2001) is one of the pertinent researchers who
developed Dweck’s research and applied goal orientation into the work place. He
distinguished individuals with learning goal orientation as those that elicited adaptive
behaviors during problem-solving tasks. Furthermore, individuals with a learning goal
orientation would prefer a task that develops their abilities by gaining new skills and
mastering new situations. Individuals with a learning goal orientation would also view ability as a flexible trait that can be continually improved by exerting effort and with persistence. As a consequence, these individuals view effort as an important factor for success and feedback as an agent to diagnose information (Vandewalle, 2001).

People with learning goal orientation then would seek and accept challenging assignments, and are very much likely to engage in challenging goals (Vandewalle, Brown, Cron, & Slocum, 1999). With these challenging tasks on hand, they will create a strategic plan and exert effort to execute one’s goal (Vandewalle, Brown, Cron, & Slocum, 1999). When facing difficulties and setbacks, these individuals will persist, as well as seek feedback in order to learn and grow (Vandewalle, Cron, & Slocum, 2001).

Performance goal orientation: Proving and avoiding goal orientation. In contrast with the learning goal orientation, people who have performance goal orientation view an ability as something that is fixed and that cannot be developed, that they do not exert effort to change or improve their abilities (Vandewalle, 2001). When receiving feedback, people with performance goal orientation views it as a judgment of their worth, that they will not only take feedback negatively, but will also avoid it as much as possible, for they would not want to look bad if they are not able to accomplish a goal (Vandewalle, 2001). Hence, those with performance goal orientation would only participate in a task if the task on hand is within their skill level and that success is ensured (Vandewalle, 2001).

More recent research has divided performance goal orientation into two different dimensions depending on a person’s self-regulation, or their ability to gain positive
judgments, or avoid negative judgments (Vandewalle, Cron, & Slocum, 2001). These two new dimensions are proving goal orientation, and avoiding goal orientation (Vandewalle, et al, 2001). When a person’s focus is demonstrating his abilities to gain positive feedback and favorable judgment, this person has proving goal orientation, while if a person gives focus on avoiding criticism of his/her abilities as well as negative feedback; a person is more likely to have avoiding goal orientation (Vandewalle, Cron, et. al, 2001). Though both proving and avoiding goal orientation are both considered as based on performance, they have different effects on different situations.

Vandewalle, et. al (2001) studied the relationship of learning, proving, and avoiding goal orientation to task performance on undergraduate students through a series of two challenging performance events. When the scores were analyzed, people who had learning goal orientation had a positive relationship with the exam scores. Thus, having learning goal orientation will more likely increase individuals’ performance. A proving goal orientation also had a positive relationship with the first exam, however, the relationship became non-significant on the second exam. On the other hand, avoiding goal orientation appeared to have non-significant relationship to both exams.

Vandewalle, et. al (2001) have found proving goal orientation to have a significant and positive relationship to effort, self-efficacy and goal setting level. However, though a positive relationship between proving goal orientation and effort are expected, the level of effort is not as effective as those exerted by those with a learning goal orientation (Elliot and McGregor, 1999; Vandewalle, et. al, 2001). Furthermore, the effort exerted
by proving goal orientation is perceived as to be shallow and superficial rather than an attempt to have a deeper understanding of the materials on-hand.

Avoiding goal orientation had non-significant relationship to self-efficacy and goal setting but had a positive relationship to effort (Vandewalle, et. al, 2001). It has been found that avoiding goal orientation had the most negative relationship to self-efficacy, which is logical since self-efficacy is decreased by negative psychological arousal (Bandura, 1997; et. al, 2001).

Goal orientation and creativity. Vandewalle, et. al (2001) have shown that goal orientation is related to people’s performance in challenging events, being mediated by effort, self-efficacy, and goal level. Learning goal orientation has a positive relationship with these mediators, such that, a person with learning goal orientation is more likely to exert effort, has high self-efficacy, and a difficult goal level. In contrast, a person with a proving goal orientation is less likely to exert effort, and is not significantly related to self-efficacy and goal level. However, a person with an avoiding goal orientation will exert minimal effort, have low self-efficacy and a low goal level.

Research on the application of goal orientation to the work place has also been studied. Vandewalle (2001) has suggested the use of goal orientation in the selection process. According to Vandewalle, a person who has learning goal orientation is more likely to be proactive, develop skills in challenging task demands, has the ability to adapt to new environments, as well as to effectively process feedback, be open to new ideas and be creative.
Vandewalle (2001) implied in his study that there might be a relationship between learning goal orientation and creativity. As most research has stated, for people to produce a creative idea, they should have a broad area of interests, are attracted to complexity, be intuitive, have aesthetic sensitivity, tolerate ambiguity, be self-confident, and relate to and be consistent in creative performance across different domains (Barron & Harrington, 1981; Gough, 1979; Martindale, 1989; Oldham & Cummings, 1996), which is also describing individuals with learning goal orientation. However, there has been no research to date to directly support these implications. This then leads to the first hypothesis:

**Hypothesis 1:** Learning goal orientation is positively related to creativity.

The relationship of performance goal orientation to performance is not as explored as the learning goal orientation. Furthermore, in the study of task performance, its relationship to performance goal orientation has been inconsistent. It has been reported to be negative (Vandewalle, et. al, 2001; Ford, Smith, Weissbein, Gully & Salas, 1998), nonsignificant (Vandewalle, et. al, 2001; Vandewalle, Brown, Cron & Slocum, 1999) and positive (Vandewalle, et. al, 2001; Hoover, Steele-Johnson, Beauregard, & Schidt, 1999).

In general, researchers such as Elliott and Dweck (1988) have established that learning goal orientation is negatively related to performance goal orientation (proving and avoiding), such that individuals who have a proving goal orientation will attempt to face obstacles if they perceive their abilities as high, but would avoid obstacles when they perceive there is an possibility for error or failure (Elliott and Dweck, 1988), while those
with an avoiding goal orientation are more likely to give up attempts to find effective ways of overcoming mistakes since they perceive themselves as having a low ability (Elliott and Dweck, 1988). Based on Elliot and Dweck's (1988) findings, people with proving goal orientation on the other hand, will limit themselves to situations that assure success, thus, tempering creativity. People with avoiding goal orientation, on the other hand, may not explore situations and produce creative ideas if there is a possibility of receiving negative feedback. However, since these implications have not been studied, the current research hypothesizes:

**Hypothesis 2:** A proving goal orientation is negatively related to creativity.

**Hypothesis 3:** An avoiding goal orientation is negatively related to creativity.

To further understand the relationship of goal orientation to creativity, the present study explored the relationship of goal orientation to creativity with consideration to openness to experience. No existing research has validated the direct effect of goal orientation and creativity. Openness to experience has been found to be related to both creativity (Feist, 1998), and learning goal orientation (Klein & Lee, 1992). Furthermore, openness to experience has been established as a moderator for creativity (Baer & Oldham, 2001; George and Zhou, 2001).

**The Nature of Openness to Experience**

Openness to experience has been defined as the "extent to which individuals are imaginative, sensitive to aesthetics, curious, independent, thinkers, and amenable to new ideas, experiences, and unconventional perspectives; it distinguishes between those
amendable to variety, novelty, routine, and familiar" (George & Zhou, 2001, p. 514).

Compared to the other five-factor personality traits, openness to experience is less understood (Klein & Lee, 2006; Barrick & Mount, 1991). It has even been proposed that openness to experience is a separate factor rather than being a dimension of human personality (Zuckerman, et. al, 1993). Openness to experience was found to have different patterns of relationship with the other personality traits that are included in the five-factor personality trait (Garcia, Aluja, Garcia, & Cuevas, 2005).

*Openness to experience and creativity.* Among all the personality traits, openness to experience has been found to be consistently related to creativity (Scratchley & Hakstian, 2001). The relationship of openness to experience to creativity has been seen as a predictor and moderator. Existing research has shown that openness to experience is positively correlated to creativity (Feist, 1998). Thus, people who have a high level of openness to experience are characterized as being imaginative, artistic, cultured, curious, original, broad-minded, and intelligent (Klien & Lee, 2006). They are also highly motivated and seek new and diverse experiences, and they engage themselves in unfamiliar situations rather than being passive (Costa & McCrae, 1992). On the other hand, people who have a low level of openness to experience are said to be more conservative and are more likely to prefer familiar and conventional ideas (Costa & McCrae, 1992).

McCrae (1987) is in agreement to this relationship when he found that the Creative Personality Scale (CPS), a measure for creativity, was most strongly and consistently
related to openness to experience compared to the other big-five personality traits. Moreover, McCrae (1987) stated in his research that openness to experience has a unique relationship to creativity compared to the other personality traits.

George and Zhou (2001) have looked into the interaction of openness to experience and conscientiousness in relation to creativity. They found that creative behavior is highest when employees who had high level of openness to experience received positive feedback and were presented with heuristic tasks, while conscientiousness would result to a low level of creative behavior if there is low coworker support and high supervisor monitoring.

Openness to Experience as a Moderator for the Goal Orientation-Creativity Relationship

The direct relationship of openness to experience and creativity has been established (George & Zhou, 2001). As a moderator, Baer and Oldham (2001) found in their study that openness to experience moderated the effect of time pressure and creativity. Baer and Oldham (2001) proposed that there in an inverted U-shaped relation between experience time pressure and creativity, and openness to experience and support moderates this relationship. Thus, people who received substantial support and scored high on openness to experience were more likely to support the proposed time pressure-creativity relationship, whereas those who received little support and scored low on openness to experience had little effect on creativity (Baer and Oldham, 2001).

Klein and Lee (1992) have found a relationship between openness to experience and learning goal orientation. Individuals who are open to experience should be willing to
entertain new ideas and try to explore new things, thus, it is also expected that openness to experience is positively correlated to learning goal orientation (Klein & Lee, 1992). Though Klein and Lee’s research established the relationship of learning goal orientation, their study did not include the other factors for goal orientation: avoiding and proving goal orientation.

To further explore the relationship of openness to experience and to all goal orientation dimensions, the present study also examined the relationship of avoiding and proving goal orientation to openness to experience. By considering openness to experience as a moderator of the relationship between the three dimensions of goal orientation and creativity, the relationship among these factors can be increased or decreased. In a study conducted by Vandewalle, et al (2001) when the relationship of the three goal orientation dimensions to performance in a challenging task were moderated by goal setting, self-efficacy, and effort, the relationship of each dimension to performance changed, thus, this shows that a moderator affects the relationship of the goal orientation constructs to the outcome. This leads the present study to explore the following research questions:

1. Does openness to experience moderate the relationship between goal orientation and creativity?

2. Does openness to experience have different moderating effects to learning, proving, and avoiding goal orientation?
METHODOLOGY

Participants

A sample of volunteers was obtained from three non-profit organizations. For this study, volunteers are defined as “people who give services such as companionship to the lonely, tutoring the illiterate, counseling to the troubled, and health care to the sick, and do so on a regular, ongoing, voluntary basis” (Clary, Sayder, Ridge, Copeland, Stukas, Haugen, and Miene, 1998, p. 1516). The non-profit organizations that participated in this study specialized in different areas. The first organization was focused on providing low-income families in the local community to gain social and economic life skills. The second organization provided regular nutrition and daily contact to senior citizens in the community. And lastly, the third organization focused on aiding individuals and family to cope with emergency situations.

Data were collected among 114 volunteers across the three organizations: 39.5% (n=45) of the volunteers belonged to the first organization; 14.9% (n=17) of the volunteers were from the second organization; and 45.6% (n=52) of the volunteers participated from the third organization. However, six volunteers had to be deleted from the data set due to the reason that these volunteers missed more than 10 questions in the study. They were deleted in the study for the purpose of consistency and minimizing errors. In the end, there were a total of 108 participants in this study, with 39.8% (n=43) from the first organization, 13.9% (n=15) from the second organization, and 46.3% (n=50) from the third organization.
The participants on this study were predominantly female, compromising 59.3% of the sample size, and the male participants made up the 39.8% of the sample. Moreover, the sample was generally single (37%) and had finished middle school (25%) or high school (10.2%).

Measures

Goal orientation. The goal orientation dimension was composed of three dimensions: learning goal orientation, proving goal orientation, and avoiding goal orientation (Vandewalle, 2001). Goal orientation was measured with a total of 13 items from a scale developed by Vandewalle (1997). Learning goal orientation, proving goal orientation, and avoiding goal orientation were measured with a 5-point scale according to how much the participants agreed to each statement. The responses were: 1-“strongly disagree”, 2-“disagree”, 3-“neither agree nor disagree”, 4-“agree”, and 5-“strongly agree.” The mean of the score for each of the goal orientation dimension was derived for analyses, with a range of possible scores of 1 to 5. A participant that is high on learning goal orientation is less likely to be high on proving and avoiding goal orientation and vice versa.

Individuals with a learning goal orientation focus on developing their competence by acquiring new skills, mastering new situations, and learning from experience (Vandewalle, et. al, 2001). Learning goal orientation was measured by five items such as “For me, development of my work ability is important enough to take risks” (α = .89). In
this research, a high score in learning goal orientation implied that a person is more likely to embrace tasks in order to gain knowledge and improve.

Individuals with proving goal orientation focus on displaying their competence and gaining favorable judgments from others while those who have avoiding goal orientation focus on avoiding negation of their competence and avoid negative judgments from others (Vandewalle, et. al, 2001). Each of the proving goal orientation and avoiding goal orientation dimensions was measured with four items. An example of a proving goal orientation item is “I like to show that I can perform better than the other volunteers” (α = .85) while items such as “Avoiding a show of low ability is more important to me than learning a new skill” was used to measure avoiding goal orientation (α = .88).

Based on the definitions, a high score in the proving goal orientation indicated that a person is more likely to select tasks that will reinforce his abilities, but avoid tasks that will lead to criticism, while a high score in the avoiding goal orientation suggests that a person is likely to avoid all risky situations that might lead to failure.

Creativity. In this study, creativity is defined as the participants' ability to “develop ideas about products, practices, services, or procedures that are novel and potentially useful to the organization” (Osland, et. al, 2007, p. 319). Zhou and George (2001) developed a 13-item scale to measure creativity (α = .96). Items such as “I suggest new ways to achieve the goals or objectives for organization” were asked to be rated in a 5-point scale. Specifically, the participants were asked to respond with 1-“not at all characteristic”, 2-“a little characteristic”, 3-“somewhat characteristic”, 4-“very
characteristic”, and 5-“extremely characteristic”. The mean of the score is derived for the analysis, with a range of possible scores of 1 to 5. This score shows that the higher the score is, the more creative the participant is.

Openness to experience. The definition of openness to experience in this study is limited to “the extent to which individuals are imaginative, sensitive to aesthetics, curious, independent, thinkers, and amenable to new ideas, experiences, and unconventional perspectives” (George & Zhou, 2001, p. 514). To measure openness to experience, a 10-item measure that was developed by Goldberg (1999) was utilized ($\alpha = .82$). The participants were asked if they agreed or disagreed with statements such as “I enjoy hearing new ideas.” To minimize response bias, negatively worded items such as “I avoid philosophical discussions” were added. To measure the participants’ extent of agreement, a 5-point scale was used: 1-“strongly disagree”, 2-“disagree”, 3-“neither agree nor disagree”, 4-“agree”, and 5-“strongly agree.” The mean of the score is derived for the analysis, with a range of possible scores of 1 to 5. This score shows that the higher the score is, the more open to experience the participant is.

Procedure

The data being used in the study are archival data. The original study was done in 2003 to 2004 through three non-profit organizations in the San Jose area. The initial researcher contacted the three organizations that participated in the study and utilized a paper-and-pencil survey to collect data across the three organizations. An administrator was present when the volunteers accomplish the survey to give instructions as well as to
answer questions. The survey administrators and participants were given instructions on how to go through the survey. This survey was 15-20 minutes long, with strict compliance to anonymity and confidentiality, without any requirement for the participants to write their names, and assuring that only general information about the whole group combined would be shared to their respective organizations.
RESULTS

Creativity has been a focus of research for Industrial/Organizational Psychology professionals, for it has been proven to be an advantage for organizations to compete in their respective industries (Tierny, Farmer, & Graen, 1999, George & Zhou, 2001). The present study aimed at understanding creativity through the three goal orientation dimensions: learning goal orientation, proving goal orientation, and avoiding goal orientation. The relationship between creativity and the goal orientation dimensions were further studied by involving openness of experience in the relationship. Zero-order correlations were used to analyze the relationship of the predictor variables (learning goal orientation, proving goal orientation, and avoiding goal orientation) and the criterion variable (creativity). A hierarchical multiple regression/correlation (MRC) was used in order to test the moderating effect of openness to experience to the three goal orientation variables and creativity, by looking into the interaction effect of the goal orientation variables and openness to experience to creativity.

Data Cleaning

Prior to testing the hypotheses of the present study, the whole dataset was examined for errors in data entry, missing data, outliers, and normality. No data entry error was committed during encoding, however, six participants were deleted from the initial pool of participants (N=114), due to missing data, thus, leaving 108 participants for the analysis. Outliers were assessed by examining scatters plots, as well as by analyzing the standard deviation with the absolute values greater than or equal to 3.0. No extreme
cases of outliers were found in the dataset. Histograms and computing for skewness and kurtosis showed acceptable normality and linearity. SPSS, a statistical software, was used in conducting the analyses in this study.

Descriptive Statistics

The means, standard deviations, and zero-order correlation of the goal orientation dimensions, creativity, and openness to experience are shown on Table 1. The internal reliability scores are found on the diagonal. The means for all variables between 2.00 and 3.70, out of a possible range of 1.00 to 5.00, implying that peaks of the distribution are mid-range. Cronbach’s alpha was utilized in measuring internal consistency within each variable. All variables appeared to be internally consistent, with cronbach alphas greater than .70 (Spector, 1992). Learning goal orientation has an $\alpha = .79$; proving goal orientation has an $\alpha = .77$; avoiding goal orientation is reliable with an $\alpha = .80$; creativity is internally consistent at $\alpha = .96$; and openness to experience has an $\alpha = .76$. The reliability scores derived by the present study were different from the reliability tests conducted by the authors of the instrument which could have been caused by the difference in the number of items. However, the reliability findings were similar, that the measures used in the study are reliable.

Zero-Order Correlation

A listwise deletion was used in analyzing a one-tailed zero-order correlation in order to have a more consistent analysis. In the goal orientation dimensions, the learning goal orientation appeared not to have any significant relationship to both learning and
avoiding goal orientations. Learning goal orientation and the avoiding goal orientation, on the other hand, were significantly correlated, with $r=.49$ at a .01 level. The interpretation of the inter-variable correlations will further be discussed in the following sections of this chapter.

**Direct Relationship of the Three Goal Orientation Dimensions to Creativity**

**Hypothesis 1.** The present study hypothesized that the learning goal orientation would be positively related to creativity. Since a positive relationship was hypothesized, a one-tailed zero correlation was computed. As illustrated in Table 1, hypothesis 1 is supported, with $r=.52$, $p<.01$, showing a moderate positive correlation. This relationship illustrates that when people have a learning goal orientation, their creativity also increases.

**Hypothesis 2.** It was hypothesized that proving goal orientation is negatively related to creativity. However, as the one-tailed zero-order correlation illustrated, this hypothesis was not supported, with $r = .07$, $p = .23$. This means that there is not a direct linear relationship between proving goal orientation and creativity.

**Hypothesis 3.** Hypothesis 3 stated that avoiding goal orientation would negatively related to creativity. This hypothesis was supported, with $r = -.17$, $p <.05$. Though this relationship has a significant negative relationship, the strength of the relationship seems small. This finding suggests that the more a person possesses an avoiding goal orientation, the lower their creativity.
Moderating Effect of Openness to Experience

Research has shown that openness to experience is significantly related to learning goal orientation (Klein & Lee, 1992) and creativity (Feist, 1998). Though these were not been hypothesized in the current study, it is interesting to see that openness to experience did not appear to have a significant relationship to both the learning goal orientation and creativity, as shown in Table 1. However, this finding should not affect the testing of the moderating effect of openness to experience on the relationship between the three goal orientation dimensions (learning, proving, and avoiding), and creativity, since the moderating interaction may change their relationships. Furthermore, it is desirable for a moderator to be uncorrelated to both the independent and independent variable to better provide an interaction effect (Baron and Kenny, 1986). This section will discuss the analysis to answer the research questions in this study.

A hierarchical MRC was used in order to answer the research questions of whether openness to experience moderates the relationship between the three goal orientation learning, proving, and avoiding) dimensions and creativity, as well as the effect of this interaction to the relationship of the predictor and dependent variables. Hierarchical MRC was the appropriate statistical analysis because it has the ability to analyze how much the moderating effect, which is reflected by the interaction brought to the relationship makes, changes the accounted for amount of variance. Moreover hierarchical MRC gives the necessary information to determine whether the goal
orientation dimensions predict creativity, which a simple zero-order correlation cannot perform.

To see the effect of the interaction, a two-step hierarchical MRC was conducted. In the first step of the analysis, the three predictor variables and the moderating variable were entered. Table 2 shows that in step 1, learning goal orientation, proving goal orientation, avoiding goal orientation, and openness to experience together are significant predictors of creativity, $R^2 = .30$, $F(4,103) = 10.92$, $p < .001$. Overall, goal orientation and openness to experience explain 30% of the variance in creativity. To further understand which goal orientation dimensions predicts creativity, their individual weights and significance were examined. Table 2 illustrates that learning goal orientation alone ($\beta = .49, p < .001$) explains 23% of the variance in creativity, implying that individuals with a learning goal orientation are more likely to be creative. However, proving goal orientation alone did not appear to contribute to creativity ($\beta = .14, p = .16$), suggesting that no matter what level of proving goal orientation individuals have, it does not seem to affect their creativity. Avoiding goal orientation has a $\beta = -.20, p < .05$, implying that the more individuals lean toward avoiding goal orientation, their creativity decreases.
Table 1. *Descriptive statistics, zero-order correlations, and reliability* (N = 108)

<table>
<thead>
<tr>
<th>Goal orientation</th>
<th>(\bar{x})</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning goal orientation</td>
<td>3.71</td>
<td>.66</td>
<td>(.79)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Proving goal orientation</td>
<td>2.50</td>
<td>.80</td>
<td>.06</td>
<td>(.77)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Avoiding goal orientation</td>
<td>2.37</td>
<td>.81</td>
<td>-.09</td>
<td>.49 **</td>
<td>(.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Creativity</td>
<td>2.95</td>
<td>.98</td>
<td>.52 **</td>
<td>.07</td>
<td>-.17 *</td>
<td>(.96)</td>
<td></td>
</tr>
<tr>
<td>5. Openness to experience</td>
<td>3.74</td>
<td>.52</td>
<td>.09</td>
<td>-.26 **</td>
<td>-.14</td>
<td>.04</td>
<td>(.76)</td>
</tr>
</tbody>
</table>

Reliability in parenthesis, found in diagonal.

\*p < .05, \**p < .01
This relationship explains 3% of the variance. Lastly, openness did not appear to significantly contribute to creativity, $\beta = -.001$, $p = .988$, therefore, the amount of openness to experience has no effect on creativity.

In step 2, the interaction of openness to experience to each of the goal orientation dimensions were analyzed, which showed a significant overall relationship, $R^2 = .33$, $F(7,100) = 6.89$, $p < .001$. However, the overall $\Delta R^2 = .03$ was not significant, $\Delta F(3,100) = 1.35$, $p = .261$, implying that the overall interaction between learning/proving/avoiding goal orientation and openness to experience did not contribute to understanding the further analyzed. As seen in Table 2, the interaction between learning goal orientation and openness to experience is not significant ($\beta = -.28$, $p = .69$) neither is the interaction between avoiding goal orientation and openness to experience ($\beta = -1.02$, $p = .21$). This implies that regardless of individuals' openness to experience, their learning goal orientation will increase/decrease as their creativity increase/decrease. For those individuals with an avoiding goal orientation, their level of openness to experience did not significantly affect the relationship between avoiding goal orientation and creativity. However, Table 2 shows that the interaction between proving goal orientation and openness to experience showed otherwise, with $\beta = 1.48$, $p < .05$. With this interaction being significant, it is vital to test the interaction, on how the interaction affects the relationship of proving goal orientation and creativity.

In order to test the interaction effect, openness to experience had to be treated as a dichotomous variable, splitting it by 'low' and 'high' respectively. In order to divide the
Table 2. Hierarchical MRC predicting creativity

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R^2</th>
<th>R^2_adj</th>
<th>ΔR^2</th>
<th>F</th>
<th>ΔF</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Goal orientation, openness to experience</td>
<td>.55</td>
<td>.30</td>
<td>.28</td>
<td>10.30***</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Learning goal orientation (LGO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.49***</td>
</tr>
<tr>
<td>Proving goal orientation (PGO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>Avoiding goal orientation (AGO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.20*</td>
</tr>
<tr>
<td>Openness to experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.02</td>
</tr>
<tr>
<td>2. Goal orientation *openness to experience</td>
<td>.57</td>
<td>.33</td>
<td>.29</td>
<td>6.89***</td>
<td>1.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGO*openness to experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.23</td>
</tr>
<tr>
<td>PGO*openness to experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.51*</td>
</tr>
<tr>
<td>AGO*openness to experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-1.02</td>
</tr>
</tbody>
</table>

*p < .05, *** p < .001
sample, a cut-off score of 3.75 was utilized, based on the central tendency of the responses, which will give us equal representation for both 'low' and 'high' groups.

Based on these two new groups, two separate linear regressions relating proving goal orientation and creativity were formulated, in order to see the change that openness to experience bring to the relationship. For 'low' openness to experience, the regression equation was: Creativity’ = 2.99 - .02 (proving goal orientation), whereas for 'high' openness to experience, the regression equation was: Creativity’ = 2.47 + .18 (proving goal orientation). Two arbitrary scores from the possible range of 1 to 5 were used in the formula to be able to plot these scores on a graph, as illustrated on Figure 1. As seen in Figure 1, individuals who are 'low' in openness to experience, their level of proving goal orientation does not matter when it is related to creativity. This relationship was shown by a straight horizontal line in the graph. However, for individuals who are 'high' in openness to experience, their creativity increases as their performance goal orientation increases. This relationship was shown by a straight diagonal line in the graph.
Figure 1. Interaction between proving goal orientation and openness to experience.
DISCUSSION

Creativity has been established as an important factor in order for companies to survive the fast changing business environment (Amabile, 1988, George & Zhou, 2001). In order to increase creativity in the workforce, it is vital to understand the different factors that lead to creativity. Previous research has implied a relationship of goal orientation and creativity (Vandewalle, 2001), however, no direct relationship has been studied. The purpose of the present research was to examine the direct relationship between the three goal orientation constructs (learning, proving, and avoiding) with creativity.

It was hypothesized that learning goal orientation would be positively related to creativity; while proving goal orientation and avoiding goal orientation were negatively related to creativity. The present study found support for the first and third hypothesis, and the second hypothesis was not supported. Moreover, the possible moderating effect of openness to experience was also considered in studying the goal orientation and creativity relationship. It was found that the level of openness to experience is irrelevant if individuals have either a learning goal orientation or an avoiding goal orientation. However, the level of openness to experience should be considered for individuals who have a proving goal orientation.

Summary of Findings

The present study has shown a moderate positive relationship between learning goal orientation and creativity. By conducting a hierarchical MRC, it further showed learning
goal orientation can predict creativity, explaining 23% of the variance. Contrary to what was hypothesized, proving goal orientation alone was shown not to be significantly related to creativity. Avoiding goal orientation was shown to have a weak negative relationship to creativity, and was further proven to explain 3% of the variance of creativity. Lastly, the analysis showed that openness to experience was not significantly related to creativity nor accounts for any variance for creativity. Overall, these three goal orientations and openness to experience explained 30% of the variance in creativity.

When the moderating effect of openness to experience was considered, the interaction effect between the goal orientation dimensions (learning, proving, and avoiding and openness to experience were analyzed. The overall interaction did not appear to be significant; neither did the individual interaction between learning and avoiding goal orientation with openness to experience. This implied that individuals' level of learning or avoiding goal orientation does not affect their creativity. However, the interaction between proving goal orientation and openness to experience appeared to be significant, explaining 3% of the variance. This implies that the relationship of proving goal orientation and creativity depends on openness to experience. Specifically, individuals with low in openness to experience will not affect the relationship of proving goal orientation with creativity, but, when openness to experience is high, as proving goal orientation increases, creativity also increases.
Implications of Findings

Theoretical. The findings of the present study solidified Vandewalle’s (2001) indirect implication that goal orientation, specifically learning goal orientation, is directly related to creativity. This relationship was expected since the description for individuals who have a learning goal orientation are parallel to those individuals who are said to be creative. Individuals with a learning goal orientation would think of different ideas, such that when they are faced with a challenging task, they create a strategic plan and exert effort to execute their goal (Vandewalle, et al., 1999) and would persist, as well as seek feedback in order to learn and grow (Vandewalle, et al., 2001). Individuals who are creative, on the other hand, are described to be attracted to complexity (Barron & Harrington, 1981; Gough, 1979; Martindale, 1989; Oldham & Cummings, 1996). Thus, both learning goal orientation and creative individuals are drawn to challenges.

Performance goal orientation (proving and avoiding) has been found to be negatively related learning goal orientation (Elliott & Dweck, 1988). This may imply a reverse of the learning goal orientation and creativity relationship for the proving and learning goal orientation relationship with creativity. However, it was only avoiding goal orientation that was found to be negatively related to creativity. A negative relationship between avoiding goal orientation and creativity was expected, since people who have this type of goal orientation would avoid any situation that will test them (Elliott and Dweck, 1988), which is unlikely of individuals who are creative. Proving goal orientation was not found to be related to creativity. There has been no established report regarding this direct
relationship. Unfortunately, there is limited resource that would support in understanding the direct relationship. However, the present study contributes to this relationship by showing a positive interaction effect of goal orientation (learning, proving, and avoiding) and openness to experience to creativity.

Since individuals who have learning goal orientation would seek out for challenges, their openness to experience may not be as relevant, and since those people who have an avoiding goal orientation would avoid all challenges, there is no point for them to consider openness to experience. However, openness of experience matters for individuals with a proving goal orientation. This may be because individuals with this type of goal orientation evaluate the task of situation at hand. They consider possible outcomes whether they would engage or withdraw from the challenge. However, individuals who are high on openness to experience are curious (George & Zhou, 2001) and this curiosity may encourage these individuals to take on challenges, and thus, be creative. Thus, the present study supports Baer and Oldham (2001), that openness to experience is a moderator for creativity.

It may also be interesting to note that though it was not hypothesized in the present study, it was found that learning goal orientation was not significantly related to openness to experience, in contradiction to Klein and Lee (1992). The present study was also not in agreement with past research that openness to experience is related to creativity (George & Zhou, 2001).
Practical. The present study did not only expand existing knowledge in goal orientation and creativity, but the new findings are beneficial to industries as well. As competition among organizations become more challenging, it is vital for organizations to find the best talents. As Vandewalle (2001) has established, goal orientation is one aspect of personality that should be considered by organizations. As he implied, goal orientation can be used in assessing candidates for hiring. Moreover, in order to strengthen the creativity in the work force, organizations should conduct training and seminars that would promote learning goal orientation in the organization. This also has implications in assessment and evaluation. As stated, individuals with learning goal orientation seek feedback, thus, organizations should have a constructive system that would inform their employees or members their progress. By doing so, they will be more inclined to be creative, and perform.

Strengths and Limitations of the Present Study

One of the strengths of the present study is that it was able to establish a direct relationship between goal orientation and creativity. Though one of the goal orientation dimensions (specifically proving) did not appear to have a direct relationship to creativity, the present study opens new possibilities in research. Furthermore, it was able to apply goal orientation to the industrial setting, which was limited since most research on goal orientation was on an educational setting. Lastly, the instruments used in the study were highly reliable (from .77 to .96). Though these scales were taken from established measures, the data from the present study are reliable.
However, the present study is not without limitations. First, motivation is a factor that has been researched to be related to both goal orientation as well as creativity. However, the present study did not take advantage of the fact that the data were collected from non-profit organizations, and did not take motivation into account. By adding this factor, the study may have more contribution both theoretically and practically since this may show new and stronger relationships among these dimensions. And lastly, the present study did not compare the results by group (e.g. organization, gender, age, etc) since there was a lot of missing responses for these demographic variables. It could also have interesting results. External validity of the present study is this limited.

Suggestions for Future Research

Based on the findings as well as limitations of the study, the relationship between goal orientation and creativity is an area for vast research. Future studies may consider looking at other factors that could be significant in this relationship, such as demographic variables, as well as other personality traits.

It may also be interesting to find the relationship of goal orientation in other constructs related to creativity, such as innovation.

Conclusion

It is crucial for organizations to be on top of their game in order to survive the growing competition in their respective industries. One factor that has received much attention at present is creativity, since it has been proven to be an effective tool for innovation and bringing change. Similar to creativity, goal orientation has received much attention from
researchers and organizations alike. Goal orientation has been found to be useful in organizations such as task performance. It has been implied that goal orientation is useful in finding employees who are creative. However, no established report has been found that shows a direct relationship for creativity and goal orientation. The present study have established this direct relationship, as well as considered the moderating effect of openness to experience in the relationship.

The present study has shown new ideas about the different factors included in the study. However, it has a very familiar implication in the end, that for companies to succeed and survive, they will have to invest on the growth of their greatest resource—their people.
REFERENCES


Costa, P. T., and McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI).*


APPENDIX

Survey Questionnaire
This survey is about the experiences of volunteers, like you at ORGANIZATION.

- It'll take about 15 minutes to complete the survey.
- Please answer the questions by marking the choice that BEST describes your feelings.
- There are no right or wrong answers.
- This survey will NOT contain your name.
- All answers shall remain confidential.

This survey is being conducted for ORGANIZATION in collaboration with the San Jose State University.
A. VOLUNTEERING HISTORY

1. Is this your first time volunteering at ORGANIZATION?  □ Yes  □ No

2. During the past 6 months about how many days have you spent volunteering with ORGANIZATION?
   ________ (number of days)

3. In one month about how many hours do you volunteer with ORGANIZATION?
   ________ (number of hours)

5. Approximately how long have you been volunteering with ORGANIZATION?
   □ 1 – 2 months
   □ 3 – 4 months
   □ 5 – 8 months
   □ 9 months - 1 year
   □ 1-2 years
   □ more than 2 years

6. How long do you intend to continue volunteering with ORGANIZATION?
   □ 1 - 3 months
   □ 4 - 6 months
   □ 7 – 9 months
   □ 10 – 12 months
   □ 1 - 2 years
   □ 2 – 3 years
   □ 3 or more years

7. People often volunteer for several reasons. Which of these reasons would you say are true for you? CHECK ALL THAT APPLY
   □ Part of requirement for a degree/class
   □ Court ordered programs (e.g., Sentencing Alternatives Program, Restorative Justice Program, etc.)
   □ For college application
   □ Considering related careers
   □ Desire to serve community
   □ Opportunity to volunteer with my family
   □ Other (write in) ______________________________________________________________
8. Are you volunteering with ORGANIZATION to complete the requirements of a degree or class that you are currently taking?

☐ Yes

☐ No

8a. If yes, what is the total number of hours required for this degree/class?

______ (total number of hours)

8b. If yes, how many hours have you volunteered up until now?

______ (total number of hours)

9. Do you/have you volunteered with other organizations?  ☐ Yes  ☐ No

10. How many hours per month do you volunteer at other organizations? __________

B. MOTIVATION FOR VOLUNTEERING AT ORGANIZATION

The following is a list of possible reasons for volunteering at ORGANIZATION. Please indicate how important each reason is to you.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not At All Important</td>
<td>Slightly Important</td>
<td>Somewhat Important</td>
<td>Very Important</td>
<td>Extremely Important</td>
</tr>
</tbody>
</table>

1. I am concerned about those less fortunate than myself.  
2. Volunteering allows me to explore different career options.  
3. I feel it is important to help others.  
4. Volunteering makes me feel better about myself.  
5. I can do something for a cause that is important to me.  
6. I feel compassion toward people in need.  
7. I can learn more about the cause for which I am working.  
8. Volunteering allows me to gain a new perspective on things.  
9. By volunteering I feel less lonely.  
10. I can explore my own strengths.
11. Volunteering helps me work through my personal problems. 1 2 3 4 5
12. Volunteering lets me learn things through direct, hands on experience. 1 2 3 4 5
13. Volunteering makes me feel important. 1 2 3 4 5
14. My friends volunteer. 1 2 3 4 5
15. Volunteering increases my self-esteem. 1 2 3 4 5
16. Volunteering can help me to get my foot in the door at a place where I would like to work. 1 2 3 4 5
17. I can make new contacts that might help my business or career. 1 2 3 4 5
18. Volunteering is an important activity to the people I know best. 1 2 3 4 5
19. Others with whom I am close place a high value on community service. 1 2 3 4 5
20. Doing volunteer work relieves me of some of the guilt over being more fortunate than others. 1 2 3 4 5
21. Volunteering will help me to succeed in my chosen profession. 1 2 3 4 5
22. Volunteering is a way to make new friends. 1 2 3 4 5
23. I can learn how to deal with a variety of people. 1 2 3 4 5
24. People I’m close to want me to volunteer. 1 2 3 4 5
25. People I know share an interest in my community service. 1 2 3 4 5
26. I am genuinely concerned about the particular group I am serving. 1 2 3 4 5
27. Volunteering experience will look good on my resume. 1 2 3 4 5
28. No matter how bad I’ve been feeling, volunteering helps me to forget about it. 1 2 3 4 5
29. Volunteering makes me feel needed. 1 2 3 4 5
30. Volunteering is a good escape from my own troubles. 1 2 3 4 5
C. YOUR CAREER PLANS

Please indicate the extent to which your experience volunteering at ORGANIZATION has affected your career views.

<table>
<thead>
<tr>
<th>1</th>
<th>Strongly Disagree</th>
<th>2</th>
<th>Disagree</th>
<th>3</th>
<th>Neither Agree or Disagree</th>
<th>4</th>
<th>Agree</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1. I am more likely to do volunteer work in the future.  
2. I am now considering a career in nonprofit organizations.  
3. I am more likely to consider a career in the nonprofit sector.  
4. I am more likely to work in the health field.  
5. I find working in nonprofit organizations an enriching experience.

D. YOUR VOLUNTEERING WORK PREFERENCES

The following set of statements refers to your volunteering work preferences. Please think about your volunteering experience at ORGANIZATION when answering these questions.

<table>
<thead>
<tr>
<th>1</th>
<th>Strongly Disagree</th>
<th>2</th>
<th>Disagree</th>
<th>3</th>
<th>Neither Agree or Disagree</th>
<th>4</th>
<th>Agree</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1. At ORGANIZATION, I am willing to select a challenging assignment that I can learn a lot from.  
2. I often look for opportunities to develop new skills and knowledge.  
3. Avoiding a show of low ability is more important to me than learning a new skill.  
4. I enjoy challenging and difficult tasks where I'll learn new skills.  
5. I prefer to avoid situations at ORGANIZATION where I might perform poorly.  
6. I prefer to work in situations that require a high level of ability and talent.  
7. At ORGANIZATION, I prefer to work on projects where I can prove myself to others.
8. I like to show that I can perform better than the other volunteers. 1 2 3 4 5
9. I try to figure out what it takes to prove my ability to others at ORGANIZATION. 1 2 3 4 5
10. When I volunteer, I enjoy it when others at work are aware of how well I am doing. 1 2 3 4 5
11. For me, development of my work ability is important enough to take risks. 1 2 3 4 5
12. I would avoid taking on a new task at ORGANIZATION if there was a chance that I would appear rather incompetent to others. 1 2 3 4 5
13. I'm concerned about taking on a task at ORGANIZATION if my performance would reveal that I had low ability. 1 2 3 4 5
14. At ORGANIZATION, I feel that I am good at generating novel ideas. 1 2 3 4 5
15. I have confidence in my ability to solve problems creatively. 1 2 3 4 5
16. I have a knack for further developing the ideas of others. 1 2 3 4 5
17. I am good at finding creative ways to solve problems. 1 2 3 4 5

In comparison to other volunteers at ORGANIZATION, how would you rate your performance as a volunteer?

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<tbody>
<tr>
<td>Strongly Disagree</td>
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<tr>
<td>Disagree</td>
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<tr>
<td>Neither Agree or Disagree</td>
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<tr>
<td>Agree</td>
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<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td></td>
<td></td>
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</tbody>
</table>

1. I work more efficiently. 1 2 3 4 5
2. I work well with others. 1 2 3 4 5
3. I am successful in the tasks that I am assigned. 1 2 3 4 5

For each of the following statements, indicate how characteristic each of the 13 behaviors is of you at ORGANIZATION

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<th>2</th>
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<th>4</th>
<th>5</th>
</tr>
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<tbody>
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<tr>
<td>A Little Characteristic</td>
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<tr>
<td>Somewhat Characteristic</td>
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<tr>
<td>Very Characteristic</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely Characteristic</td>
<td></td>
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</tr>
</tbody>
</table>

1. I suggest new ways to achieve the goals or objectives for ORGANIZATION. 1 2 3 4 5
2. I come up with new and practical ideas to improve ORGANIZATION. 1 2 3 4 5
performance.

3. I search out new technologies, processes, techniques, and/or product ideas.  
   1 2 3 4 5

4. I suggest new ways to increase the quality of service at ORGANIZATION.  
   1 2 3 4 5

5. I am a good source of creative ideas.  
   1 2 3 4 5

6. I am not afraid to take risks.  
   1 2 3 4 5

7. I promote and champion ideas to others.  
   1 2 3 4 5

8. I exhibit creativity at ORGANIZATION when given the opportunity.  
   1 2 3 4 5

9. I develop adequate plans and schedules for the implementation of new ideas.  
   1 2 3 4 5

10. I often have new and innovative ideas at ORGANIZATION.  
    1 2 3 4 5

11. I come up with creative solutions to problems at ORGANIZATION.  
    1 2 3 4 5

12. I often have a fresh approach to problems when I volunteer at ORGANIZATION.  
    1 2 3 4 5

13. I suggest new ways of performing tasks at ORGANIZATION.  
    1 2 3 4 5

E. YOUR BELIEFS

The following sets of statements are regarding your beliefs about human nature. There are no right or wrong answers. Please indicate the extent to which you agree or disagree with the statements.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Neither Agree or Disagree</th>
<th>4 Agree</th>
<th>5 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You have a certain amount of intelligence and you really can’t do much to change it.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Whether a person is responsible and sincere or not is deeply ingrained in their personality. It cannot be changed very much.</td>
<td>1 2 3 4 5</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3. You can learn new things, but you can’t really change your basic intelligence.</td>
<td>1 2 3 4 5</td>
<td></td>
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<tr>
<td>4. A person’s moral character is something very basic about them and it can’t be changed much.</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
5. Your intelligence is something about you that you can’t change much.  
6. There is not much that can be done to change a person’s moral Traits (e.g., conscientiousness, uprightness, and honesty).

<table>
<thead>
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<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td><strong>F. ABOUT YOU IN GENERAL</strong></td>
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</tbody>
</table>

The following statements are about your interests in general. Please indicate the extent to which you agree or disagree.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree or Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
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<td>9.</td>
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<tr>
<td>10.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
G. ABOUT YOU

1. Are you...
   □ male □ female

2. What is your age?
   □ under 18 □ 45-64
   □ 18-24 □ 55-64
   □ 25-34 □ 65 or older
   □ 35-44

3. Are you...
   □ African American or Black
   □ Hispanic or Latino
   □ White or European American of non-Hispanic descent
   □ Asian American or Asian
   □ Native American
   □ Other: Please specify (optional) __________

4. This question is about your employment status. Check ALL that apply.
   □ Working full-time for pay
   □ Working part-time for pay
   □ Unemployed
   □ Retired
   □ Student

H. YOUR OPINION

Now we really want to hear from you in your own words. Please answer the following questions.

1. Do you feel that you are making a difference in the community by volunteering with ORGANIZATION?

   . What changes or improvements would you make to improve your experience as a ORGANIZATION volunteer?
3. Are you comfortable with the amount of time you are asked to contribute to ORGANIZATION?

4. How do you feel about being asked to participate in activities in addition to your weekly route?

Thank you for your participation!

PLEASE MAIL YOUR SURVEY IN THE SELF-ADDRESSED STAMPED ENVELOPE PROVIDED.