Fermenting Innovation: Talk is not Cheap and Valuing Leads to Value

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Submitted to Organizational Studies

University of Michigan

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March 9th, 2012

Acknowledgements

It is my pleasure to thank the people who made this thesis possible. First and foremost, I would like to thank my advisor, Professor Ybarra, who provided invaluable guidance and support throughout. I would not have been able to organize and refine my ideas without his willingness to read draft after draft and quickly give me insightful feedback. The week before my thesis proposal was due, I had no advisor and no project. It was Professor Ybarra who asked me to help him with his research, and for that I am forever grateful. Second, I would like to thank another member of the research team, Frankie Graziano. Working on this project alone would have been overwhelming, and I am lucky to have had the opportunity to work with such a motivated, intelligent, and genuinely likable partner. Finally, I would like to thank Professor Heaney for keeping me focused on the big picture throughout the project and answering all of my many questions.

Abstract

Innovation determines the success of social organisms at the individual, species, organizational, and macroeconomic levels. Analysis of these levels suggests two crucial inputs for organizational innovation: *Innovation Valuing* and *Knowledge Exchange*. To test hypotheses related to these inputs, a research team (including this researcher) created a comprehensive survey instrument measuring organizational and personal behaviors and characteristics believed to be relevant to the generation, revelation, and implementation of innovative ideas. We distributed the survey to 236 individuals across 18 organizations. Our analysis of the data confirmed that *Innovation Valuing* predicts *Perceived Innovative Output* (Hypothesis 1a), *Knowledge Exchange* predicts *Perceived Innovative Output* (Hypothesis 1b), *Innovation Valuing* predicts *Knowledge Exchange* (Hypothesis 1c), and *Knowledge Exchange* mediates the effect of *Innovation Valuing* on *Perceived Innovative Output* (Hypothesis 2). The latter finding is particularly important and contributes to the literature by providing additional insight into what drives innovation in organizations. Understanding how to generate an innovative environment is crucial for individual firms and for society as a whole.

Introduction

This study examines innovation, or the implementation of new ideas (Amabile, 1983, 1996; Cummings 1965). In the past, humans relied solely on religion to explain creation and to instigate change (Csikszentymihalyi, 1996). With the invention of the printing press, however, knowledge started traveling farther and faster, ushering in the 17th century Enlightenment (Eisenstein, 1968; Wilson & Reill, 2004). Since that time, mankind has increasingly used science and innovation for explanation and instigation, respectively.

Innovation results when social systems incubate and hatch insights to generate gradual and momentous improvements over time (Downs & Mohr, 1976; Kuhn, 1962). Religion claims God as the *sole* agent of creation, but the changes in society since the Enlightenment suggest "a new view of man's role in the universe: he creates order by taking risks. This means that rather than being an assertion of human power, innovation is an acceptance of human responsibility" (Drucker, 1957, p. 19). Accepting this responsibility requires knowledge of the very *process* this study helps demystify: innovation.

Charles Darwin contributed to our understanding of how innovation causes societies, organizations, and individuals to evolve. He observed that adaptability to scarce resources—and to competition for these resources—in a dynamic environment is the key determinant of the viability of both species and organisms (Darwin, 1859). Yet, adaptability determines success far beyond the level of the "organism." Macroeconomic prosperity also depends on the ability to generate new solutions in the face of competition. According to President Obama (2010):

> The key to our success [in a global economy] – as it has always been – will be to compete by developing new products, by generating new industries, by maintaining our role as the world's engine of scientific discovery and technological innovation. It's absolutely essential to our future.

This ecological view does not only explain biological life and economic phenomena. Organizations, too, gain competitive advantage through effectively responding to uncertainty and accurately identifying future opportunities for growth (Drucker, 1985; Hannan & Freeman, 1977; Miles & Snow, 1978; Tucker, 1998). At each level of analysis, survival depends on the ability to generate and to implement solutions to undefined problems—in other words—to innovate.

If scientific disciplines are viewed as "keys" unlocking a specific subset of "locks" (i.e. challenges or problems) then innovation is the master key. Thus, this study aims to enhance our understanding of this "master key" by developing a process model for innovation in organizations.

The Organizational and Cognitive Bases for Innovation

While innovation shapes social systems of all scales, organizations often serve as the intermediary between individuals and larger social processes. As such, organizational innovation has been the topic of considerable study. Some researchers analyze innovation at the level of the external organizational environment (Arrow, 1962; Demsetz, 1969; Jadlow, 1981; Leventhal & March, 1981); others analyze it at the organizational level (Amabile, 1997; Amabile & Gryskywicz, 1989; Cummings, 1965); and others at level of the person (Amabile et al, 1996; Drucker, 1957). This study uses the "idea" as the unit of analysis (Johnson, 2010; Page, 2007) because it applies to all three levels. To analyze is to literally break a concept, issue, or problem down into smaller parts; thus, even a focus on the most granular level—individual cognitive processes—sheds light on

organizational innovation. Two particularly relevant hallmarks of human cognition are as follows:

1. Internalization of language: an internal monologue that determines *which* actions to take.
2. Reconstitution: the *ability* to join, alter, and reconstruct old ideas to create novel ones.

Though dependent on internalization for its activation, it is reconstitution that underlies goal-directed creativity (Barkley, 1977), or innovation. Reconstitution is an individual cognitive ability, but groups also reconstitute ideas and create new solutions (Cummings, 2004; Ruef, 2002; Tang, 1998). Conceptualizing reconstitution as a group process allows us to apply these two hallmarks of cognition to existing models of innovation in organizations.

Many scholars view innovation in terms of *outcomes*. One basic outcome model distinguishes the generation of ideas (creativity) and their implementation (innovation) (Amabile, 1983; Amabile et al, 1996; Cummings 1965). Incorporating internalization and reconstitution into a two-step outcome model generates the following understanding. First, internalization represents the choice to engage in the innovative process. Second, creativity results when reconstitution allows individuals and groups to combine old ideas and to create new ones (Koestler, 1964). Finally, internalization determines which potential solution to implement.

Another proposed model for innovation consists of four stages: defining a problem, gathering the necessary resources (including information) to solve it, pursuing improvements and alterations, and deciding on a solution (Amabile, 1983; Amabile et al, 1996; Stein 1957). Internalization and reconstitution also provide an effective lens by

which to view this stage model. To define something as a problem implies the necessity of generating a solution. Internalization determines what requires action and thus underlies problem definition. By allowing for the *combination* of ideas, reconstitution gives people both a reason to seek out information and a means to use this information to improve their ideas. Finally, internalization determines which potential solution to implement.

Interpreting outcome and stage models in this way allows for the identification of two critical features of innovative organizations: employees who have internalized the organization's value (i.e. importance) placed on innovation, and the ability for these employees to share their ideas and knowledge. The present study examines three implications of this conceptual framework. First, innovation valuing within an organization should influence innovative output. Second, knowledge exchange should influence innovative output. Finally, innovation valuing should operate, at least partially, through knowledge exchange to influence innovative output.

Innovation Valuing

Organizations that *support* innovation and are comprised of individuals who *value* innovation are more likely to be *innovative*. Furthermore, a wide body of literature suggests that the alignment of organizational and individual values characterizes effective organizations (O'Reilly & Chatman, 1986). Specifically, organizational values *motivate* individual *innovative* behavior (Amabile & Gryskiewicz, 1989; Barney, 1986; Cummings, 1965; Ekvall, 1996; Hage & Dewar, 1973; Jaskyte & Dressler, 2008; Martins & Terblanche, 2003; Valencia & Jiminez, 2010). In a recent study surveying nonprofits in Alabama, researchers concluded *innovation* as the organizational value that most predicts *innovativeness* (Jaskyte & Dressler, 2008).

The "valuing" of innovation is an abstract concept; studying it empirically requires specific manifestations of this value (O'Reilly & Chatman, 1986). According to social learning theory, expectancy and reinforcement determine behavior (Bandura, 1965), such as the decision to engage in innovation. Therefore, one would expect the degree to which a company values innovation to be reflected in performance appraisals, promotions, and bonuses (Larkin & Larkin, 1996). Indeed, goal setting, idea encouragement, and rewards are frequently cited as predictors of an individual's motivation to innovate (Amabile, 1997; Amabile *et al*, 1996; Chandler *et al*, 2000; Cummings, 1965; Greve, 2003; Filipczak, 1997; Inderst, 2008). These predictors communicate to employees the aspirations of the company (Greve, 2003). If employees clearly envision these aspirations (which are not yet met), they frame current firm performance as a loss (relative to aspirations) rather than framing aspirations as a gain (relative to current performance). Losses more powerfully motivate human behavior than do gains (Kahneman & Tversky, 1979), so by generating and communicating high aspirations to employees, organizations motivate them to work towards realizing these aspirations (Greve, 2003).

Recruitment and hiring also reflect whether an organization values innovation (Larkin & Larkin, 1996). Because companies that employ innovative people are more innovative (Glynn, 1996; Amabile, 1985), valuing innovation in hiring should breed organizational success. All the aforementioned organizational characteristics and behaviors result when firms place a high value on innovation. Thus, innovation valuing should increase innovative output.

Knowledge Exchange

The above research suggests a *motivational* effect of innovation valuing on innovative output; it increases the likelihood that employees will enter the innovative process. Once they have made this decision, however, a key question arises: how do they help achieve innovation? Macroeconomic theory provides a useful point of reference.

The exchange of *resources* has long been considered the key to economic productivity (Smith, 1776). In the present day, improvements in economic productivity result from innovation, which itself results from the exchange of a specific resource—knowledge (Ridley, 2010). The exchange of knowledge also characterizes innovation at the organizational level (Albrecht & Ropp, 1984; Amabile & Gryskiewicz, 1989; Cummings, 1965; Cummings, 2004; Monge et al, 1992; Nonaka, 1991; Paulus & Yang, 2000; Tjosvold & McNeely, 1988). Information has been viewed as the key input to innovation (Ridley, 2010) and innovative ideas can emerge when problem solvers combine the best parts of less innovative ideas (Page, 2007). It follows that increasing the ability of employees to attain and combine ideas should improve their ability to innovate. In other worlds, knowledge exchange should increase innovative output.

From Theory to Practice

Much of the reviewed research suggests innovation valuing and knowledge exchange should *independently* predict innovative output. This research, however, proposes a specific relationship between these two predictors. “Economic Miracles,” such as when the Japanese economy approached a 10% annual growth rate from 1955-1973 (Katzner, 2001), suggest the nature of the relationship between innovation valuing and knowledge exchange.

Conceptualizing the Japanese government as "a firm" and Japanese corporations as "employees" allows one to learn a great deal about innovation in organizations. Prior to WWII, the Japanese government encouraged collaboration between organizations, stemming from the deeply engrained cultural value of shared responsibility. This resulted in industry dominating conglomerates called *Zaibatsu.* After winning WWII, the Allies occupied Japan and enacted highly unpopular anti-monopoly laws to break up *Zaibatsu* (i.e. corporate restructuring without employee buy in). Eventually, the Japanese government relaxed these restrictions, once again allowing the tight knit collaboration characterizing much of Japanese history (i.e. corporate restructuring with employee buy in) (Bader, 1994). In so doing, Japan's government encouraged the emergence of *Keiretsu*, or intricate partnerships between corporations, banks, and the government that rely on a stable framework of knowledge and resource exchange (Allingson, 1997). Knowledge and resource exchange leads to regional innovation of all types (Cooke, 2001), and is thought to have greatly contributed to Japan's economic miracle (Allingson, 1997).

Not only have researchers have used the rise of *Keiretsu* to explain the economic miracle, but they have also focused on characteristics of individual Japanese firms. Central to both explanations of success is the idea that no single agent, whether a firm, a division, or an individual, bears *exclusive* responsibility for the overall success of the system. Instead, the system achieves success when *all* affiliated agents share responsibility (Nonaka, 1991). In other words, organizations achieve success when all employees are motivated to engage and participate in the innovative process.

Research suggests that when organizations demonstrate innovation as a core value, they motivate employees to innovate (Rotter et al, 1954). The research on

knowledge exchange, on the other hand, suggests a more *causal* effect on innovative output; knowledge exchange creates new ideas, improves existing ideas, and allows for the diffusion of innovations (Cummings, 2004). The Japanese economic miracle shows how both interact to breed innovative outcomes. It is unlikely that the relaxation of anti-monopoly laws would have given rise to *Keiretsu* (and knowledge exchange) had the value of working together not been so embedded in the Japanese culture. This implies that innovation valuing and knowledge exchange depend on each other to foster innovation.

Hypotheses

This research examines the relationship between two crucial inputs to organizational innovation: innovation valuing and knowledge exchange. Innovation valuing influences the decision to enter the innovative process, knowledge exchange generates potential solutions, and, the more a company values innovation, the more likely it is to implement innovative ideas. Mediating variables (knowledge exchange) explain *how* an independent variable (innovation valuing) affects a dependent variable (innovative output) (Baron & Kenny, 1986). Previous research has suggested a relationship between knowledge exchange and innovation valuing (O'Reilly & Chatman, 1986; Orton, 1990; Wilson & Corbett, 1983). It has not, however, proposed a mediated relationship. This research fills a gap in the literature by proposing mediation as the mechanism by which knowledge exchange influences the effect of innovation valuing on innovative output. Based on the preceding review and discussion, I propose the following hypotheses:

Hypothesis 1a: Innovation Valuing predicts Innovative Output

Hypothesis 1b: Knowledge Exchange predicts Innovative Output

Hypothesis 1c: Innovation Valuing predicts Knowledge Exchange

Hypothesis 2: Given Hypotheses 1a, 1b, and 1c, Knowledge Exchange mediates the effect of Innovation Valuing on Innovative Output

Methods

The present research is a subset of a larger study on innovation in organizations. In this larger study, a research team (including this researcher) created a comprehensive survey instrument to assess a number of perceptions and organizational characteristics believed relevant to the generation, revelation, and implementation of creative ideas. Some concepts, such as interpersonal competition and environmental dynamism, are represented on the survey but not in the current research. Part of the purpose of the present research is to extract meaningful constructs for innovation valuing, knowledge exchange, and innovative output from the larger survey. Other researchers have created surveys to assess innovation in organizations (Amabile, 1987; Amabile & Gryzkiewicz, 1989; Ekvall, 1996; Siegel & Kaemmerer, 1978); this research incorporates many of their findings, but also assesses novel concepts of interest[1].

Survey Response Format

Most items on the survey used a five-point Likert format, with options ranging from “Strongly Disagree” to “Strongly Agree”, including a neutral option, “Neither Agree nor Disagree.” Additionally, we included a “Do Not Know” option for questions concerning facts about the organization, such as “The topics of innovation and creativity come up in performance reviews.” A “Do Not Know” response here could indicate that the person has not been working at the company long enough to have his or her

[1] Please refer to Appendix 2 for a full listing of survey items

performance reviewed. This indicates something qualitatively different than a neutral response.

The majority of the questions assessed employee *perceptions* of work place dynamics, and therefore did not require a "Do Not Know" option. An example is "I feel that many new ideas are put forth each year in this organization, but only a few are recognized and implemented." A "Do Not Know" response here would be equivalent to "Strongly Disagree." Furthermore, we tailored the vocabulary in our survey to the expected vocabulary of our participants. For example, while some believe creativity and innovation refer to distinct concepts (Amabile & Gryskiewicz, 1989), to most people they are synonymous and thus were used interchangeably on the survey.

Sample

The survey underwent different phases of revision and pilot testing. After completing the survey, our research team used personal contacts to help distribute it to a variety of organizations. We provided our contacts with a unique online link accompanied by a short, tailored letter explaining the goals of the research and our value proposition. In exchange for administering our survey, we offered participating companies a copy of our completed research and a personalized consulting report analyzing their responses. These contacts then distributed the survey to employees within their organization. Participants were told to allot 20-25 minutes to take an anonymous survey. Whether or not the survey was to be taken on company time was left to the discretion of the organization. The sample is comprised of 236 respondents, 49 (20.8%) of which did not answer the demographic questions. Table 1 shows the demographic profile of the other 187 participants, and the percentages shown are in regards to the 187 participants who completed these questions.

Table 1: Demographic Profile of Sample Respondents

Characteristic	Response Options	Frequency (%)
Gender	Male Female	60 (32.1%) 127 (67.9%)
Education Level	Some High School High School Graduate Some College 4-Year College graduate Graduate or Professional School	0 (0.0%) 9 (4.8%) 47 (25.1%) 74 (39.5%) 57 (30.1%)
Years Working for Organization	Less than 2 2-5 6-10 More than 10	31 (16.6%) 43 (23.0%) 47 (25.1%) 66 (35.3%)
Years in Industry	Less than 2 2-5 6-10 More than 10	10 (5.3%) 27 (14.4%) 38 (20.3%) 112 (60.0%)
Annual Income	Below $30,000 $30,000-$49,999 $50,000-$69,999 $70,000-$89,999 $90,000-$109,999 $110,999-$129,999 $130,000-$149,999 $150,000+ Prefer not to answer	15 (8.0%) 55 (29.4%)→25th percentile 49 (26.2%)→50th percentile 21 (11.2%) 12 (6.4%)→75th percentile 8 (4.3%) 2 (1.1%) 8 (4.3%) 17 (9.1%)
Position in Corporate Hierarchy	1 (Low i.e. front line worker) 2 3 4 5 6 7 8 9 10 (High i.e. CEO)	24 (12.8%) 28 (15.0%)→25th percentile 20 (10.7%) 17 (9.1%) 28 (15.0%)→50th percentile 18 (9.6%) 19 (10.2%)→75th percentile 13 (7.0%) 12 (6.4%) 8 (4.3%)

The demographic profile of this sample illustrates that the "typical[2]" responding employee was a college-educated woman who had been working in the same organization for about 6 years and in the same industry for over 10 years. The typical respondent earned $74,400 annually and could be placed somewhere in the "center" of the corporate hierarchy.

Eighteen different organizations were represented in the sample. Table 2 shows the demographic profile of these organizations (based on employee responses). Most organizations were in the for-profit sector or non-profit sector. Four respondents claimed to work for the government, however, none of the companies sampled were governmental agencies. These individuals may have been working on government-funded research projects or service contracts. The majority of respondents worked in organizations with over 100 employees. Additionally, more than half of the respondents did not know their organization's operating budget, which makes it difficult to calculate an average for the sample.

The sample aims to represent a "typical" US organization, but it should be viewed as a convenience sample. Most of these firms were based in the Eastern and Midwestern United States. The organizations sampled came from distinct industries, including: health care, education, technology, manufacturing, and legal services. Not shown in Table 2 is the fact that healthcare companies were disproportionately represented.

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[2] For the responses with ranges (such as annual salary), the average was calculated by using the midpoint of the range as a proxy. For example, the mean for annual income was 3.72. A response of 3 indicates $50,000-$69,999 and a response of 4 indicates $70,000-$89,999; my calculations used $60,000 and $80,000 for responses 3 and 4. The mean was calculated as follows: (.72(80,000-60,000))+60,000= 74,400.

Table 2: Demographic Profile of Sample Organizations

Characteristic	Response Options	Frequency (%)
Classification	For-Profit Non-Profit Government	108 (57.8%) 75 (40.1%) 4 (1.7%)
Number of Employees	<10 10-19 20-49 50-99 100-499 500-999 1,000-4,999 5,000-9,999 10,000+	7 (3.7%) 6 (3.2%) 18 (9.6%) 6 (3.2%) 77 (41.2%)→25th and 50th percentiles 21 (11.2%) 16 (8.6%)→75th percentile 11 (5.9%) 25 (13.4%)
Operating Budget	$50,000-$299,999 $300,000-$999,999 $1 million- $4.9 million $5 million- $ 9.9 million $10 million or more Do not know	2 (1.1%) 8 (4.3%) 24 (12.8%) 11 (5.9%) 44 (23.5%) 98 (52.4%)

Measures

To evaluate hypotheses linking organizational characteristics and perceptions to innovative output first requires an outcome variable measuring innovative output. Previous research has used patents (Roderick & Gaze, 2011), growth and profitability (Antoncic & Hisrich, 2001), new products (Ekvall, 1996; Sorescu & Spanjol, 2008), and third party assessments (Abbey & Dickson, 1983) as indicators of organizational innovativeness.

Many of the organizations surveyed in the present study lacked widely available financial documents by which to assess some of the aforementioned factors. This study uses employee *perceptions* of an innovative reputation as a proxy for innovative output. Though perceptions do not map perfectly onto "objective" innovation, perceptions still provide an accurate representation of the real world (Swann, 1984), and they have been

used as a proxy for innovative output before (Amabile & Gryskywicz, 1989; Ruef, 2002). The following are descriptions for each of the three variables used in this study[3].

Perceived Innovative Output*, 2 items*: This includes the following two items: "This organization has a reputation as one that implements creative ideas rapidly," and "This organization has been recognized publicly for its creativity and innovativeness." In asking employees to assess *external* views of their organization's innovativeness, these items should increase objectivity. If participants believe the organization has an innovative reputation, this likely correlates with innovative output. These two items were adequately correlated (r= .597, p= .000), so they were combined into an index of innovative output.

Innovation Valuing*,* 9 items: The items comprising this scale tap into perceptions of organizational attempts to motivate people to innovate, which signify an underlying value placed on innovation. This value manifests itself in a number of ways, two of which are encouragement and rewards (Amabile, 1997; Amabile et al, 1996; Chandler et al, 2000; Cummings, 1965; Filipczak, 1997; Inderst, 2008). Examples of questions assessing these include: "People are encouraged to solve problems in this organization," and "There are rewards given out for generating ideas in this organization." A value on innovation also manifests itself in performance appraisals, hiring, and promotion practices (Larkin & Larkin, 1996). Some items that reflect these include: "The topics of creativity and innovation come up in performance reviews," and "Creative and innovative potential are part of the hiring criteria for applicants seeking employment in this organization." This scale displayed high internal reliability (α= .857).

[3] Refer to Appendix 1 for a full listing of the items comprising each of the variables of interest

Knowledge Exchange, 9 items: This variable assesses behaviors related to exchange of knowledge. This includes individuals' likelihood of sharing ideas, such as "If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it." It also includes organizational factors relevant to knowledge exchange, such as, "In this organization, there is a lively and active flow of ideas." This scale displayed high internal reliability (α= .841).

Covariates

Accurately modeling how *Innovation Valuing* (H1a) and *Knowledge Exchange* (H1b) affect innovative output requires controlling for demographic factors that may influence innovative output. A meta-analysis of the relationship between firm size and innovativeness found that both personnel and non-personnel measures of organization size have an effect on innovative output (Damanpour, 1992). Therefore, I controlled both for number of employees and estimated operating budget. People who did not provide an estimate for their organization's operating budget were excluded from these analyses.

Many studies indicate that education should also influence innovative output (Leung, 1998; Rogers, 1983). Some view innovative ability as a function of the number of cognitive "tools" an individual or a group possesses (Johnson, 2010; Page, 2007; Ruef, 2002). Many of these tools are learned through education, implying that increasing education should also increase innovative ability. Therefore, I used education level as a covariate.

Studies have linked job satisfaction with individual and organizational innovativeness (Richmond & McCroskey, 1979), therefore I controlled for *satisfaction* with position in organization. Position in the corporate hierarchy also must be controlled

for. Studies show leadership and occupational status to play significant roles in both perceived and actual innovativeness (Jaskyte, 2004; Rogers, 1983). Therefore, it is critical to control for position in hierarchy. It is also important to control for income because many organizations give out bonuses for innovation. This might result in those that are more innovative earning more, on average. People who chose "prefer not to answer" for the annual income question were excluded from these analyses.

Results and Analysis

My analysis establishes how *Innovation Valuing* (H1a) and *Knowledge Exchange* (H1b) predict *Perceived Innovative Output* separately. It also establishes how *Innovation Valuing* predicts *Knowledge Exchange* (H1c). These are two of the three steps necessary to be able to test that *Knowledge Exchange* mediates *Innovation Valuing's* effect on *Perceived Innovative Output* (H2) (Baron & Kenny, 1986).

Descriptive Statistics

Prior to conducting any analyses regarding mediation, I examined the means and standard deviations for my three variables of interest, exhibited in Table 3. Most people have positive associations with innovative and creative outcomes. Therefore, it is possible that *Perceived Innovative Output* is skewed by a social desirability bias, the proclivity for viewing oneself in the best possible light (Fisher, 1993). Though the mean of *Perceived Innovative Output* exceeds the neutral response of 3 (in a five point scale), the fact that a neutral response for *Perceived Innovative Output* lies within one standard deviation of the mean suggests that social desirability bias did not play a significant role. The reason *Innovation Valuing* had fewer responses than the other two variables is

because it drew on more items with "Do Not Know" responses, which were excluded from the analysis.

Table 3: Descriptive Statistics for the Three Variables of Interest

	Perceived Innovative Output	Innovation Valuing	Knowledge Exchange
Mean	3.3350	3.3030	3.7514
N	203	161	198
Std. Deviation	.81818	.67220	.61604

Regression Analyses

I conducted my regression analyses as a two-stage elimination procedure. In the first stage, I entered only the potential covariates into the model. Any covariate failing to meet the $p < .10$ criterion was excluded from the second stage analysis. In the second stage, I entered the independent variables along with the covariates into a regression predicting the dependent variable.

First, I entered the following covariates into a regression predicting *Perceived Innovative Output*: estimate of number of employees, estimate of operating budget, level of education, satisfaction with position in organization, position on corporate hierarchy, and annual income. Satisfaction with position in the organization was the sole covariate making it through the first stage elimination ($\beta = .368$, $p = .003$), so it was retained in the subsequent analyses.

To examine my mediation hypothesis (H2), I followed the steps detailed in Baron and Kenny (1986). First, I entered *Innovation Valuing* along with the covariate of satisfaction with position into a regression predicting *Perceived Innovative Output*. The analysis yielded a significant effect of *Innovation Valuing* on *Perceived Innovative*

Output (β= .414, *p*= .000). Therefore, if an organization values innovation more, this is likely to be reflected in increased innovative output. This supports H1a and illustrates the presence of a direct effect between *Innovation Valuing* and *Perceived Innovative Output*.

Second, I entered *Knowledge Exchange* along with the covariate of satisfaction with position into a regression predicting *Perceived Innovative Output,* and found a significant effect of *Knowledge Exchange* on *Perceived Innovative Output* (β= .422, *p*= .000). This supports H1b, as it shows that increasing the amount of *Knowledge Exchange* in an organization predicts increased innovative output. This also satisfies a condition for mediation: the proposed mediator (*Knowledge Exchange)* must have a direct effect on the dependent variable (*Perceived Innovative Output*) (Baron & Kenny, 1986).

Given that the independent variable must predict the proposed mediator in order to establish mediation (Baron & Kenny, 1986), I tested hypothesis 1c next. I entered *Innovation Valuing* into a regression predicting *Knowledge Exchange*. *Innovation Valuing* significantly predicted *Knowledge Exchange* (β= .742, *p*= .000). This supports H1c and indicates that increasing the organizational value placed on innovation increases the amount of knowledge exchange.

Lastly, I wanted to test whether adding *Knowledge Exchange* to the model reduced the effect of *Innovation Valuing* on *Perceived Innovative Output*. In this model, *Knowledge Exchange* still exhibited a significant effect on *Perceived Innovative Output* (β= .230, *p*= .028). Compared to the regression with *Innovation Valuing* as the sole independent variable, this model generated a reduction in the effect of *Innovation Valuing*, from (β= .414, *p*= .000) to (β= .272, *p*= .007). This suggests that, in the presence of *Knowledge Exchange*, *Innovation Valuing* plays a less significant role in *Perceived Innovative Output*.

The model predicting *Perceived Innovative Output* with *Knowledge Exchange* accounted for the smallest proportion of the explained variance (R^2= .258), followed by the model predicting *Perceived Innovative Output* with *Innovation Valuing* (R^2= .295). The model predicting *Perceived Innovative Output* with both variables accounted for the highest proportion of explained variance (R^2= .317). Though this is useful, the present research is primarily interested in the relationship between *Innovation Valuing* and *Knowledge Exchange*, rather than in the amount of variability they explain in predicting *Perceived Innovative Output.* The results of these analyses are summarized below.

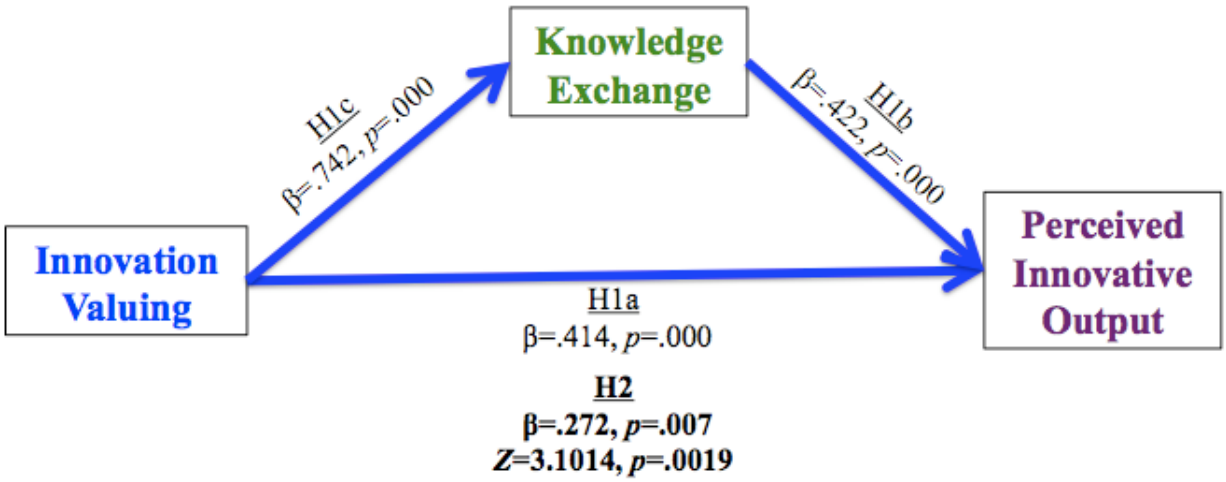
Table 4: Regression Results for Tested Models

Covariates/ Independent Variables	Dependent Variables				
	Perceived Innovative Output			**Knowledge Exchange**	**Perceived Innovative Output**
	Regression 1: First Stage Elimination	Regression 2: Innovative Valuing (H1a)	Regression 3: Knowledge Exchange (H1b)	Regression 4: Innovation Valuing (H1c)	Regression 5: Innovation Valuing & Knowledge Exchange (H2)
Satisfaction with Position	β= .368 *p*= .003**	β= .209 *p*= .008**	β= .142 *p*= .054*	-	β= .154 *p*= .057*
Position on Hierarchy	β= -.205 *p*= .275	-	-	-	-
Number of Employees	β= -.112 *p*= .444	-	-	-	-
Estimated Operating Budget	β= -.019 *p*= .894	-	-	-	-
Education Level	β= -.751 *p*= .455	-	-	-	-
Annual Income	β= .039 *p*= .832	-	-	-	-
Innovative Valuing	-	β= .414 *p*=.000***	-	β= .742 *p*= .000***	β= .272 *p*= .007**
Knowledge Exchange	-	-	β= .422 *p*= .000***	-	β= .230 *p*= .028**
R^2	.125	.295	.258	.551	.317

*, **, and *** indicate significance at the *p*< .1, *p*< .05, and *p*< .001 levels, respectively.

In order to test the statistical significance of the reduction of *Innovation Valuing's* effect from (β= .414, *p*= .000) to (β= .272, *p*= .007), I conducted a SOBEL mediation analysis (Preacher & Hayes, 2004) with *Perceived Innovative Output* as the dependent variable, *Knowledge Exchange* as the proposed mediator, and *Innovation Valuing* as the independent variable. The SOBEL analysis found this model and the reduction in the effect of *Innovation Valuing* to be significant (*Z*= 3.1014, *p*= .0019), supporting H2. This suggests *Knowledge Exchange* is a mediator of *Innovation Valuing*. The effect on *Perceived Innovative Output* of *Innovation Valuing* did not decrease to 0 after adding *Knowledge Exchange* to the regression; therefore, this is not an example of complete mediation, which in actuality is rare (Baron & Kenny, 1986). Nevertheless, because the SOBEL analysis showed the reduction in magnitude as significant, I can conclude that *Knowledge Exchange* partially mediates the effect of *Innovation Valuing* on *Perceived Innovative Output* (H2). These results lead to the following mediation model:

Figure 1: Knowledge Exchange as a Mediator of the Effect of Innovation Valuing on Perceived Innovative Output

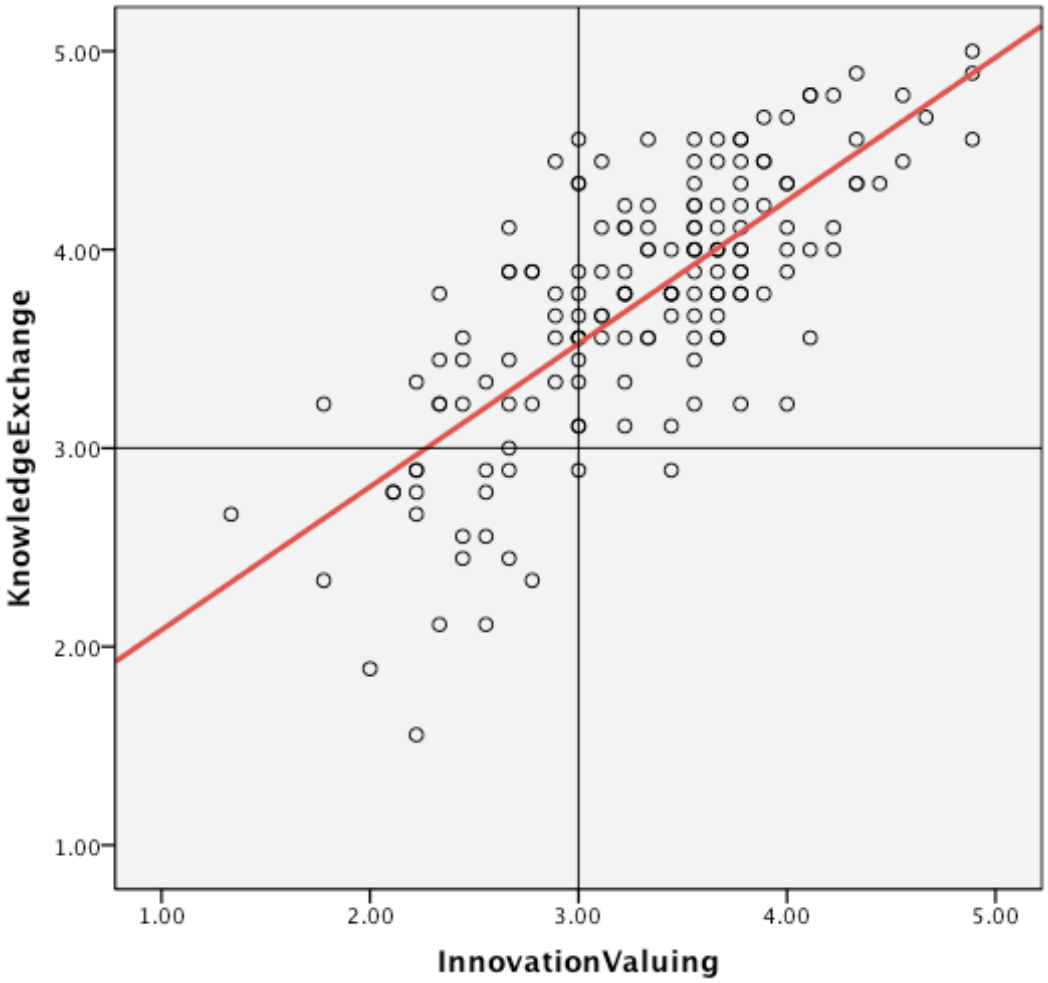


After successfully verifying that *Knowledge Exchange* mediates the effect of *Innovation Valuing* on *Perceived Innovative Output* (H2), I conducted a post hoc analysis to further examine the relationship between *Innovation Valuing* and *Knowledge Exchange.* This consisted of plotting *Knowledge Exchange* as a function of *Innovation Valuing* (see Figure 2). To help analyze the graph, I inserted reference lines at the neutral level for each variable. One interesting feature of the graph is the increased variability in the bottom left quadrant (low *Knowledge Exchange* and low *Innovation Valuing*) compared to the rest of the graph. This does not appear to be caused by low *Innovation Valuing*; the data adhere to the best-fit line in a consistent manner when both high and low levels of *Innovation Valuing* are paired with a high level of *Knowledge Exchange* (top left and top right quadrants). It is only when *Knowledge Exchange* is below neutral that the data adhere much worse to the best-fit line, suggesting that low *Knowledge Exchange* causes this increased variability. Why might this be*?*

Researchers have shown a strong correlation between knowledge exchange and "cultural consensus," or the degree to which all employees hold the same values (Wilson & Corbett, 1983). This suggests that when employees do not exchange knowledge, they will have less consistent beliefs about the values espoused by their organization. Not only are beliefs less consistent, but the lack of data points in the bottom right quadrant (low *Knowledge Exchange* and high *Innovation Valuing*) suggest that it is nearly impossible for a culture to have below neutral *Knowledge Exchange* and above neutral *Innovation Valuing.* The correlational nature of this study suggests that *Knowledge Exchange* may cause *Innovation Valuing* instead of the other way around (H1c). This would suggest *Innovation Valuing* as the mediator and not *Knowledge Exchange.* A SOBEL analysis with *Innovation Valuing* as the proposed mediator of *Knowledge Exchange* generates

significant results (Z=3.2212, p= .0013); the direction of the mediation is unclear. Considering the importance of *Knowledge Exchange* to the innovative process, it seems likely that companies that exhibit *Innovation Valuing* according to the operational definition of this study also exhibit it by encouraging *Knowledge Exchange.*

Figure 2: *Knowledge Exchange* as a Function of *Innovation Valuing* (H1c)



Discussion

This research generated four major findings. First, organizations are likely to see higher innovative output when increasing their levels of *Innovation Valuing* (H1a). They can use a number of channels to increase *Innovation Valuing*, including: promotions, hiring, rewards, goal setting, and encouragement. Second, organizations are likely to

increase innovative output when increasing the levels of *Knowledge Exchange* among employees (H1b), specifically, when they allow diverse types of communication and emphasize knowledge sharing between employees from different areas of the organization. The third finding connects the first two by suggesting that organizations can improve their levels of *Knowledge Exchange* by improving their levels of *Innovation Valuing* (H1c). Finally, there exists a mediated relationship between *Knowledge Exchange* and *Innovation Valuing* on innovative output, but the direction of the relationship is unclear (H2).

The primary contribution of this research to the literature is the mediation relationship between *Innovation Valuing* and *Knowledge Exchange*. While previous research suggests a relationship between *Innovation Valuing* and *Knowledge Exchange* (O'Reilly & Chatman, 1986; Orton, 1990; Wilson & Corbett, 1983), to our knowledge, this is the first research to empirically support a mediated relationship.

These findings also help reconcile previous models regarding innovation. Outcome models view innovation in two sequential steps: idea generation and idea implementation (Amabile, 1983; Amabile et al, 1996; Cummings 1965). Other models view innovation as four non-sequential stages: defining a problem, gathering the necessary resources (including information) to solve it, pursuing improvements and alterations, and deciding on a solution (Amabile, 1983; Amabile et al, 1996; Stein 1957). Internalizing the value of innovation should motivate employees to approach everyday situations with an innovative eye, increasing the likelihood that they will define problems and generate ideas. Exchanging knowledge provides employees the raw resources to pursue improvements in their ideas. Finally, in internalizing the value of innovation,

employees increase the probability they will decide to implement a new solution once they have generated alternatives.

In sum, placing a high value on innovation makes innovative thinking a salient mental schema for employees, but only with an environment of knowledge exchange can they fuse the *best* parts of their ideas. *Innovation Valuing* should breed innovative outcomes by increasing the *quantity* of early stage ideas, while knowledge exchange should engender innovative outcomes by increasing the *quality* of mature ideas resulting from vetting, recombination, and selection. Future research could address how each of these two constructs of interest affects idea quality and idea quantity.

Limitations of the Study

Despite the contributions of the present research, the study is not without limitations. For example, a selection effect might dictate that only innovation-focused organizations were willing to participate in this type of study. It should be noted, however, that prior to enlisting our personal connections, we cold-called a number of organizations—including those with innovative reputations—and were universally rebuked. The *only* participants enlisted came about through personal connections. Therefore, an organization's willingness to take the survey appeared determined by factors other than an organizational focus on innovation. Our personal contacts within organizations ranged from chief executives to frontline workers. Our contacts' position may have influenced both the number and type of employees that took the survey at each company.

Companies that pay on a strict hourly basis may be underrepresented in the sample because they would be more likely to view time spent taking the survey in zero sum terms as taking away "work" productivity. Additionally, the use of perceptions as a

proxy for innovative output is another limitation of this research. Even though perceptions provide an adequate representation of reality (Swann, 1984), alternative measures could be utilized in future work.

A final limitation of this study is its correlational nature. Correlations show a relationship between two variables, but they do not show the direction of the relationship. In addition, there is always the specter of the unidentified "third" variable that may be responsible for the observed results. Nevertheless, given the research suggesting *Innovation Valuing* (Amabile, 1997; Amabile et al, 1996; Chandler et al, 2000; Cummings, 1965; Greve, 2003; Filipczak, 1997; Inderst, 2008 Jaskyte & Dressler, 2008) and *Knowledge Exchange* (Albrecht & Ropp, 1984; Amabile & Gryskiewicz, 1989; Cummings, 1965; Cummings, 2004; Monge et al, 1992; Nonaka, 1991; Paulus & Yang, 2000; Tjosvold & McNeely, 1988) as predictors of innovation, it is reasonable to suggest that *Innovation Valuing* and *Knowledge Exchange* do, in fact, influence innovative output.

Conclusion

While the finite extent of the market once limited specialization and economic productivity (Smith, 1776), in the 21st century, physical space limits neither. Airplanes allow people to conduct formal business from thousands of miles away and the explosion of Internet usage means people from opposite sides of the globe can now exchange knowledge, goods, and services without traveling anywhere. Technology has given rise to the core competency model of extreme specialization, in which firms outsource key aspects of their business (Quinn, 1999) and focus on developing a small number of world class-capabilities (Pralahad & Hamel, 1991). Like *Keiretsu,* these firms could not thrive

independently, but when the market allows them to share their skills, the created whole exceeds the sum of its parts.

The survival of core competency model organizations, however, requires that people continue demanding their services. Since Gordon Moore made the accurate (Keyes, 2008) forecast that computer processing power would double every two years (Moore, 1965), the world has been changing at an increasing rate. Just as the most skilled lobotomist in the world would be unemployed today, specialized firms that do not adapt to changes in their environment go extinct. In a dynamic world, firms with specific core competencies get left behind. Innovation is the only core competency that allows for long-term survival (Tucker, 1998).

As deeper insights into the nature of problem solving are uncovered and technology continues penetrating every aspect of life, mankind's collective ability to innovate should improve. Innovation is not, however, a panacea. Behavioral economics teaches that humans often fail to see the long-term ramifications of their actions, especially in the face of immediate profits (Strotz, 1956). Financial innovation, or the creation of new types of securities, for example, played a major role in the current financial crisis (Lewis, 2010; Senate Report 2011). Therefore, government must create incentives that direct innovation to the proper channels. Furthermore, individual innovators must orient their abilities not towards their own short-term welfare, but towards the long-term welfare of society.

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Appendix 1: Items Included in Each Variable of Interest

Perceived Innovative Output

Q70 This organization has a reputation as one that implements creative ideas rapidly.

Q71 This organization has been recognized publicly for its creativity and innovativeness

Innovation Valuing

Q5 Many employees with innovative ideas have been promoted to higher positions in this organization.

Q6 This organization provides time during normal working hours for employees to work on organizational "pet" projects that are not necessarily part of their job descriptions.

Q7 Creative and innovative potential are part of the hiring criteria for applicants seeking employment in this organization.

Q9 The topics of creativity and innovation come up in performance reviews.

Q11 This organization expects me to generate creative and innovative ideas on a regular basis.

Q14 There are rewards given out for generating ideas in this organization.

Q88 People are recognized for creative work in this organization.

Q90 New ideas are encouraged in this organization.

Q92 People are encouraged to solve problems in this organization

Knowledge Exchange

Q22 If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it.

Q26 When I have a great idea, I am hesitant to share it because I am worried that it will not be adopted. (Reverse scored)

Q30 If I come up with a good idea, but do not know how to implement it, I am likely to ask someone for help.

Q31 I trust my close coworkers and fully share information and ideas with them.

Q40 Our leaders encourage us to spot problems early and to offer ideas for solutions or improvements.

Q44 Communication across boundaries (departments, divisions) is encouraged in this organization.

Q45 Open, candid discussions are encouraged in the workplace, even if they are uncomfortable at times.

Q49 If I have a question regarding a specific topic, I am confident this organization employs an expert I can speak to.

Q85 In this organization, there is a lively and active flow of ideas.

Appendix 2: the Complete Squelching Innovation Survey Instrument[4]

Q1 NOTE: Many of the items you will be asked to respond to deal with your opinions about the organization in which you work. In addition, many of the items will refer to creativity and innovation in your organization. For the purposes of this survey, we will use the terms creativity and innovation jointly to refer to the process of coming up with new ideas and the implementation of new ideas, whether those ideas are created within the organization or externally.

Q2 DISCLAIMER: All the data collected in this survey will be averaged together and individual cases are never studied. Though they may see the final results of the study, none of your coworkers will be able to trace specific responses to you. Thus, your responses are anonymous. We therefore ask that you answer each question with consideration and honesty.

Q4 Employees who exhibit creative ideas are recognized publicly within the organization.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q5 Many employees with innovative ideas have been promoted to higher positions in this organization.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

[4] The timing questions were removed from the survey, which is why some of the numbers skip.

Q6 This organization provides time during normal working hours for employees to work on organizational "pet" projects that are not necessarily part of their job descriptions.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q7 Creative and innovative potential are part of the hiring criteria for applicants seeking employment in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q8 The word "innovation" (or a close synonym) is included in our company mission statement.
- ❍ Yes (1)
- ❍ Not Sure (2)
- ❍ No (3)

Q9 The topics of creativity and innovation come up in performance reviews.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q10 I feel that many new ideas are put forth each year in this organization, but only a few are recognized and implemented.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q11 This organization expects me to generate creative and innovative ideas on a regular basis.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q13 When the organization is profitable or budgetary constraints are few, there are more rewards given out for creativity and innovation.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q14 There are rewards given out for generating ideas in this organization.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q15 I feel that higher ups in this organization will be rewarded to a greater degree than bottom line workers for coming up with creative ideas.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q17 This organization encourages competition.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q18 Many fellow employees compete to gain recognition for new ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q19 In general, the employees at this organization are competitive.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q21 This organization is likely to penalize someone for taking a risk (e.g., suggesting a new approach) that ends up failing.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q22 If I spotted a problem in how we do things in this organization, I would feel comfortable raising the issue or talking to others who have the capacity for resolving it.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q23 When I get a new idea, I share it with _____.
- ❑ No One (1)
- ❑ A Handful of Co-Workers (2)
- ❑ All of my Co-Workers (3)
- ❑ My Manager (4)

Q24 In this organization there have been problems with people using others' ideas, even if the individual used the idea by accident.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q25 When I have a great idea I am careful to make sure I get full recognition for it.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q26 When I have a great idea, I am hesitant to share it because I am worried that it will not be adopted.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q27 When I generate a great idea, my motivations are:
- ❑ To Advance the Organization (1)
- ❑ To Advance my Career (2)
- ❑ Intrinsic (Generating Ideas is Reward Enough) (4)
- ❑ Other (5) _____

Q28 If I generated a good idea, I will usually spend _____ contemplating and researching it before sharing it.

- ❍ A Minute (1)
- ❍ An Hour (2)
- ❍ A Day (3)
- ❍ A Week (4)
- ❍ A Month (5)

Q29 If I come up with a good idea, but do not know how to implement it, I am likely to give up on the idea.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q30 If I come up with a good idea, but do not know how to implement it, I am likely to ask someone for help.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q31 I trust my close coworkers and fully share information and ideas with them.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q32 If I get a good idea, I am reluctant to share it because it is likely to foster jealousy and dislike among my coworkers.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q33 In this organization, managers tend to receive credit for creative ideas their employees generate.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q34 If I generate and share a good idea, I am likely to be put in charge of its implementation.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q35 My coworkers and I tend to approach problems in similar ways.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q37 This organization has very strict rules on taking others' ideas, whether done on purpose or by accident.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q38 If someone took my idea, I would know exactly who I should talk to and the steps I should take to get credit for my idea.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q39 My manager's leadership style is conducive to creativity.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q40 Our leaders encourage us to spot problems early and to offer ideas for solutions or improvements.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q41 Our leaders encourage us to challenge their: (choose all that apply)
- ❑ Decisions (1)
- ❑ Processes (2)
- ❑ Ideas (3)
- ❑ Styles of Leadership (4)
- ❑ Other (5) _____
- ❑ None of the Above (6)

Q42 Emails sent within the organization are monitored.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q44 Communication across boundaries (departments, divisions) is encouraged in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q45 Open, candid discussions are encouraged in the workplace, even if they are uncomfortable at times.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q46 My colleagues and I aim to be flexible and able to change.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q47 My colleagues and I spend our free time thinking about creative ideas, processes, or services that could help this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q48 Most of my work is conducted at the individual level rather than at the group or team level.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q49 If I have a question regarding a specific topic, I am confident this organization employs an expert I can speak to.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q50 This organization has an employee generated system (platform, wiki, other capturing device) used to share_____.

- ❑ Best Practices (1)
- ❑ Ideas (2)
- ❑ Processes (3)
- ❑ Other (4) _____
- ❑ None of the Above (5)

Q52 The culture of this organization fosters innovation.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q53 The physical layout of this organization is conducive to innovation.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q54 My workplace environment is conducive to focus and concentration.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q55 There is little noise in the office or space in which I spend most of my work time.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q56 Colleagues often distract me from my work.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q57 I am intrinsically motivated to come up with creative ideas -- I'd do it even if I did not get paid for it.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q58 At work, I have all the information I need at my disposal in order to generate new ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q59 I work closely with _____ people (choose a range of people below).
- ❍ 0-5 (1)
- ❍ 6-10 (2)
- ❍ 11-20 (3)
- ❍ 21-40 (4)
- ❍ 41+ (5)

Q60 This company broadcasts the areas of expertise of its employees so that others know to whom they can turn for advice.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q61 Please give one example of a way your organization's culture fosters creativity and innovation.

Q62 Please give one example of a way your organization's culture hinders creativity and innovation.

Q64 My colleagues and I pride ourselves in our ability to create new ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q65 Most organizations experience tension between doing what is known and what works (and what current customers and stakeholders like and want) and trying new things such as pursuing new strategies, products, services, or ways of doing things.How would you characterize the organization in which you work?:
- ❍ Sticking to what is tried and true and not attempting new things (1)
- ❍ Sticking generally to what is tried and true but attempting new things only on occasion (2)
- ❍ Striking a balance by doing what is tried and true but also actively attempting various new things on a regular basis (3)

Q66 This organization is willing to consult outsiders when it has a problem.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q67 When this organization makes a change, people embrace it.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q68 I am an early adopter of new technologies.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q70 This organization has a reputation as one that implements creative ideas rapidly.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q71 This organization has been recognized publicly for its creativity and innovativeness.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q72 Outsiders view this organization as reluctant to change.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q74 I think I am more creative than others.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q75 It is never quite clear or predictable as to who will generate the good ideas in this organization.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q76 People who are higher up in the corporate hierarchy generate most of the ideas in this organization.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q77 There is a group of individuals in this organization that creates most of the ideas that move the organization forward.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q78 In this organization, lower tier and front line workers are responsible for carrying out the ideas of the higher ups, not for generating their own ideas.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q79 Some people within this organization have access to special information that allows them to come up with ideas others can't.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q80 I think many other employees in this organization are creative.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q81 What percent of creativity is innate, and what percent is learned? (Answers must sum to 100)
_____ Innate (1)
_____ Learned (2)

Q83 I feel that I am working on important projects.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q84 The tasks in my work are challenging.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q85 In this organization, there is a lively and active flow of ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q86 There is generally a cooperative and collaborative atmosphere in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q87 This organization has a nurturing environment.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q88 People are recognized for creative work in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q89 There is an open atmosphere in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q90 New ideas are encouraged in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q91 People are rewarded for creative work in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q92 People are encouraged to solve problems in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q93 This organization has a good mechanism for encouraging and developing creative ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q95 I feel that top management is enthusiastic about my project(s).
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q96 In my daily work environment, I feel a sense of control over my own work and my own ideas.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q97 I feel challenged by the work I am currently doing.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q98 Ideas are judged fairly in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q99 The tasks in my work call out the best in me.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q100 I am satisfied with the level of creativity called for in my daily work.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Disagree or Agree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q102 There are few external threats to the survival and well-being of this firm/ organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q103 The markets this firm/organization operates in are rich in opportunities for growth.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q104 This firm must frequently change its practices to keep up with competitors.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q105 The actions by competitors are quite easy to predict.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q106 Consumer tastes are fairly easy to forecast in the industry this organization operates in.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q107 If I had to choose between "the same" or "changing" to describe our current business and regulatory environment, changing would describe it better.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q108 Compared to a couple of years ago, this organization has grown considerably.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q110 Front line employees in this organization participate in the strategic decision process.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q111 This organization has highly formalized channels of communication for routine processes and practices.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)
- ❍ Do Not Know (6)

Q112 When the business, regulatory, and social environment is dynamic and changing quickly, organizations should stick to what is tried and true and wait for more stable times to experiment and try new approaches.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q114 Most organizations can be characterized by traits, just as people can. For example, a person can be characterized as smart or as someone who likes to learn, as can an organization. Using the traits below, please choose 4 traits that you believe your organization should work on strengthening (if you see it as a positive trait that should be strengthened) or diminishing (if you see it as a negative trait that should be diminished). Specifically, please indicate 4 positive traits you would like your organization to strengthen and 4 negative traits you would like your organization to diminish.

Q115 Choose 4 positive traits you would like your organization to strengthen.

- ❑ Active (1)
- ❑ Ambitious (2)
- ❑ Caring (3)
- ❑ Clever (4)
- ❑ Considerate (5)
- ❑ Competent (6)
- ❑ Determined (7)
- ❑ Efficient (8)
- ❑ Ethical (9)
- ❑ Friendly (10)
- ❑ Generous (11)
- ❑ Honest (12)
- ❑ Independent (13)
- ❑ Industrious (14)
- ❑ Reliable (15)
- ❑ Warm (16)

Q116 Choose 4 negative traits you would like your organization to diminish.

- ❑ Aggressive (1)
- ❑ Aimless (2)
- ❑ Aloof (3)
- ❑ Withdrawn (4)
- ❑ Arrogant (5)
- ❑ Dishonest (6)
- ❑ Hypocritical (7)
- ❑ Insensitive (8)
- ❑ Lazy (9)
- ❑ Mean (10)
- ❑ Selfish (11)
- ❑ Tokenistic (12)
- ❑ Undisciplined (13)
- ❑ Unscrupulous (14)
- ❑ Messy (15)
- ❑ Passive (16)

Q118 We gladly take on a broader range of challenges than others (with similar resources) would be able to.
- ❍ Never (1)
- ❍ Rarely (2)
- ❍ Sometimes (3)
- ❍ Often (4)
- ❍ Always (5)

Q119 We deal with new challenges by applying a combination of our existing resources and other resources inexpensively available to us.
- ❍ Never (1)
- ❍ Rarely (2)
- ❍ Sometimes (3)
- ❍ Often (4)
- ❍ Always (5)

Q120 When we face new challenges we put together workable solutions from our existing resources.
- ❍ Never (1)
- ❍ Rarely (2)
- ❍ Sometimes (3)
- ❍ Often (4)
- ❍ Always (5)

Q122 The following items are intended to assess how people approach problems. As you read through each item, think about whether the statement is consistent with how you typically approach challenges or problematic situations in you life or work.

Q123 There are always problems to solve, so it is important to categorize them into those that need action and those that don't.
- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q124 When a situation is unclear, I find it useful to experiment and test ideas to help clarify what is going on.

- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q125 Problem-solving is about experimenting and continuously re-defining the problem at hand.

- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q126 During problem solving, if outcomes are not quite what I expected, I try to understand why.

- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q127 I enjoy solving problems that are new and not well defined.

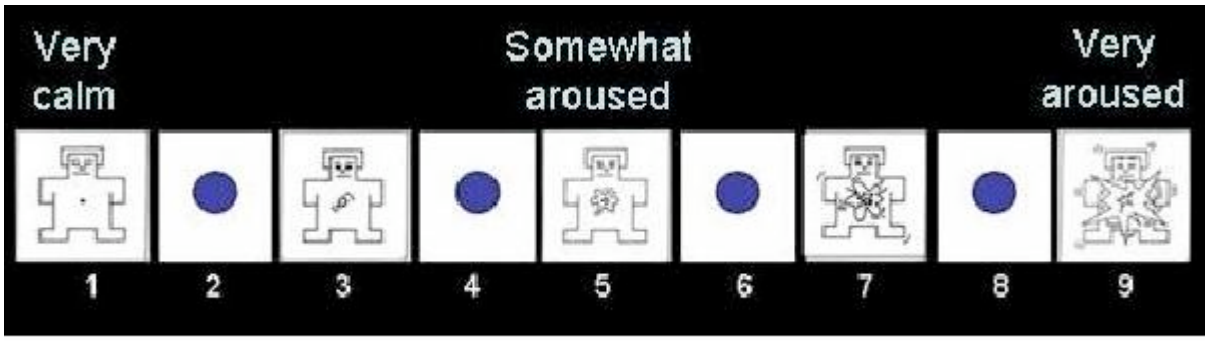
- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q128 I have various ideas or hunches when problem solving, and I test them to see if they hold water.

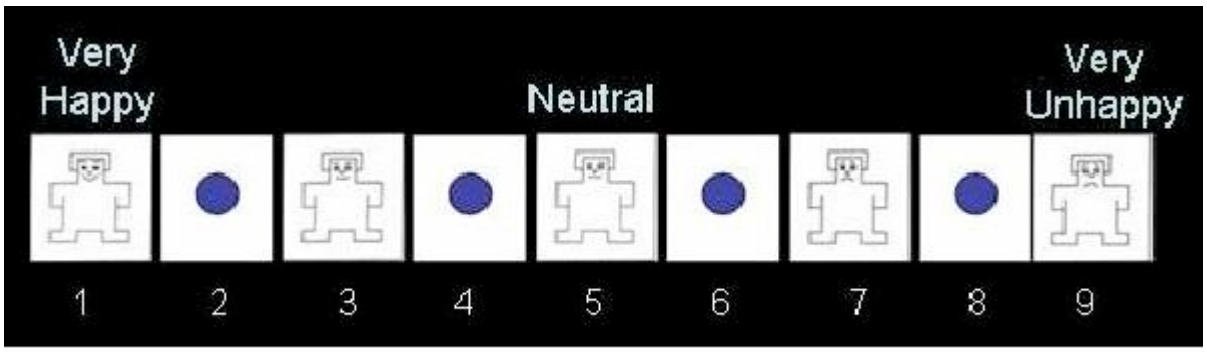
- ❍ Does not describe my approach (1)
- ❍ Describes my approach a little bit (2)
- ❍ Describes my approach moderately (3)
- ❍ Describes my approach very much (4)

Q130 Please choose the image that corresponds to how you generally feel while you're at work. When you click on your choice, the image will turn green. Clicking on the image twice will cancel your choice.

Q131 Please indicate how you feel while at work.



Q132 Please indicate how you feel while at work.



Q134 What is your age?

Q135 What is your gender?
- ❍ Male (1)
- ❍ Female (2)

Q136 What is your ethnicity?
- ❑ African American/ Black (1)
- ❑ American Indian/ Alaska Native (2)
- ❑ Asian American/ Pacific Islander (3)
- ❑ Caucasian/ European American (4)
- ❑ Hispanic/ Latino (5)
- ❑ Middle Eastern (6)
- ❑ Other (7) _____

Q137 What is the highest level of education you have attained?
- ❍ Some high school (1)
- ❍ High school graduate (2)
- ❍ Some college (3)
- ❍ 4 year college graduate (B.A. or B.S.) (4)
- ❍ Graduate or professional school (M.D., J.D., Ph.D.) (5)

Q138 What is the title of your job?

Q139 Where are you in the hierarchy of your organization? (1= low in the organization, ie: frontline worker; 10= high in the organization hierarchy, ie: CEO)
- ❍ 1 (Low) (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (High) (10)

Q140 What is your annual income?
- ❍ Below $30,000 (1)
- ❍ $30,000-$49,999 (2)
- ❍ $50,000-$69,999 (3)
- ❍ $70,000-$89,999 (4)
- ❍ $90,000-$109,999 (5)
- ❍ $110,999-$129,999 (6)
- ❍ $130,000-$149,999 (7)
- ❍ $150,000 and above (8)
- ❍ Prefer not to answer (9)

Q141 I am very satisfied with my present position in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q142 I identify with this organization and with what it does.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q143 Being a member of this organization is an important part of who I am.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q144 I feel ties with the other people who work in this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q145 I feel a sense of like-mindedness with other people who are part of this organization.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q146 I am committed to this organization and desire to help advance its goals.
- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Q148 The organization I work for is:
- ❍ For Profit (1)
- ❍ Non-profit (2)
- ❍ Government (3)

Q149 How many years have you been in this industry?
- ❍ Less than 2 years (1)
- ❍ 2 to 5 years (2)
- ❍ 6 to 10 years (3)
- ❍ More than 10 years (4)

Q150 How many years have you been working for this organization?
- ❍ Less than 2 years (1)
- ❍ 2 to 5 years (2)
- ❍ 6 to 10 years (3)
- ❍ More than 10 years (4)

Q151 How many years has your organization been in existence?

Q153 What was your organization's operating budget for the last year? (In your best estimate)
- ❍ < $50,000 (1)
- ❍ $50,000 - $299,999 (2)
- ❍ $300,000 - $999,999 (3)
- ❍ $1 million - $4.9 million (4)
- ❍ $5 million - $9.9 million (5)
- ❍ $10 million or more (6)
- ❍ Do Not Know (7)

Q154 How many people are employed in your organization (In your best estimate): If there are multiple locations, in this one.

- ❍ < 10 (1)
- ❍ 10 - 19 (2)
- ❍ 20 - 49 (3)
- ❍ 50 - 99 (4)
- ❍ 100 - 499 (5)
- ❍ 500 - 999 (6)
- ❍ 1,000 - 4,999 (7)
- ❍ 5,000 - 9,999 (8)
- ❍ 10,000+ (9)

Q156 This organization has an account on:

- ❑ Facebook (1)
- ❑ Twitter (2)
- ❑ LinkedIn (3)
- ❑ Google+ (4)
- ❑ MySpace (5)
- ❑ Another social networking site (6) _____
- ❑ None (7)
- ❑ Do Not Know (8)

Q157 If I were in charge, this organization would place _____ emphasis on its social networking efforts.

- ❍ Much Less (14)
- ❍ Less (15)
- ❍ The Same (16)
- ❍ More (17)
- ❍ Much More (18)