Subjective Task Perception and Motivational Outcomes:

Toward Lifting the Veil on Work-Leisure Constructs

#### Abstract

Past studies have examined how social cues (someone else introducing a task as work or leisure) affect motivation; however few empirical inquiries have determined whether or not one's own task-type perception shares a similar moderating effect. This study examines how subjective perception of a task as work or leisure influences motivation. Twenty-nine American working and retired professionals completed the Perceived Task-Type / Motivation Instrument (PTTMI). Results revealed people are more motivated, on average, during tasks perceived as leisure than tasks perceived as work. As such, the study's implications are dually served both for practical lines of perceptive intervention, and as call-to-action for further theoretical examination.

"If the doors of perception were cleansed everything would appear to man as it is, infinite. For man has closed himself up, till he sees all things through narrow chinks of his cavern."

-William Blake

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# Introduction

Scholarly research suggests a motivational paradigm shift is underway within contemporary organizations. Studies indicate employees are now driven by more than financial benefits alone and are concerned with factors such as spirituality, quality of life, work/life balance, and social responsibility (Karakas, 2010; Dehler & Welsh, 1994). A recently conducted survey of employee satisfaction by the Conference Board offers, "Americans hate their jobs more than ever before in the past 20 years, with fewer than half saying they are satisfied," (Live Science, 2007). Conference Board director Lynn Franco states that, "Although a certain amount of dissatisfaction with one's job is to be expected, the breadth of dissatisfaction is somewhat unsettling, since it carries over from what attracts employees to a job to what keeps them motivated and productive on the job," (Live Science, 2007).

How then, can companies attract and retain engaged and motivated employees? A growing body of research seeks to address this very question; marking a convergence between two inherently connected yet often disparate academic fields: organizational behavior and psychology. At the organizational level, theories like Senge's *The Learning Organization* and Nonaka's *Knowledge Management* serve as theoretical blueprint for bridging the cognitive gap between yesterday's programs and practices with today's employee needs (Senge, 1999, 2008, 2009; Nonaka, 1991, 2001). While theoretical constructs as these offer hope for future generations, what is the typical American employee to do when she finds herself disengaged and lacking motivation today? In these trying economic times, when companies' primary objective is often sheer survival, can employees and managers truly rely on organizational-level intervention for an immediate solution? Research and popular sentiment suggest they cannot; however, hope is not lost for employees seeking to improve their current situation.

Psychologist Mihaly Csikszentmihalyi has dedicated over three decades of research addressing the question of how employees, and people in general, can improve work and everyday experiences. In his theory of flow, Csikszentmihalyi's baseline inquiry extends well beyond the walls of the organization, and seeks to answer, in general, "what makes a life worth living," (www.ted.com, 2008). In his examination of artists, athletes, and heads of corporate industry, Csikszentmihalyi's focus lies on the near ecstatic, out-of-body, human state - that can be generated when a person reaches a harmonious balance between challenges and skills. He argues that this state of flow resides somewhere between high degrees of arousal and control, and seeks to qualify the conditions necessary to reach this point (www.ted.com, 2008). His principle thesis is that "the consequence of forging life by purpose and resolution is a sense of inner harmony, a dynamic order in the contents of consciousness," (Csikszentmihalyi, 1990).

The concept holds relevance for the organizational environment due to the theory's implications for employee motivation; in flow, people function at their fullest capacity, and the activity itself is the reward. When experiences are reclaimed and liberated through consciousness, "one begins to harvest the genuine rewards of living," rather than "forever straining for the tantalizing prize dangled just out of reach," (Csikszentmihalyi, 1990). This can also be qualified as intrinsic motivation: "motivation to engage in an activity purely for the sake of the activity itself," (Lepper, Greene, & Nisbett, 1973). Intrinsic motivation is more sustainable and cost effective than extrinsic motivation, since the necessity of complex and costly reward systems are eliminated or reduced from the equation. In addition, because individuals seek to replicate flow experiences; "this introduces a selective mechanism into psychological functioning that fosters growth," (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003).

In their seminal 1989 article, *Optimal Experience in Work and Leisure*, LeFevre's and Csikszentmihalyi's findings offered compelling insight into the relationship between employee perceptions and quality of experience. The researchers offer, "Commonsense assumptions notwithstanding, the most positive experiences in people's lives seem to come more frequently from work than from leisure settings," (Csikszentmihalyi & LeFevre, 1989, p. 820). These findings lead to a noted paradoxical situation because most people identify leisure time as more positive. Csikszentmihalyi and LeFevre offer that the "obligatory nature of work masks the positive experience it engenders," resulting in a discrepancy between cognition and reality (Csikszentmihalyi & LeFevre, 1989, p. 821).

In an effort to thwart societal disconnect between cognition and reality, Csikszentmihalyi and LeFevre propose two "lines of intervention that suggest themselves for improving these conditions," (Csikszentmihalyi & LeFevre, 1989, p. 821). The first solution is for people to acknowledge, "How many negative feelings they experience when their free time does not meet the conditions of flow," and second to "disregard the cultural mandate against enjoying work," (Csikszentmihalyi & LeFevre, 1989, p. 821). Though in the twenty-two years since the study, Csikszentmihalyi and others have examined the role of flow, intrinsic motivation, and quality of experience, there exists a void in the research addressing employees' perceptions as an intervening or moderating variable.

The goal of this study is to address this void, by examining the degree to which employees' perception of a task or activity as "work" or as "leisure" impact motivation levels. Of specific interest is how employee work/leisure task perception affects whether or not they find the experience intrinsically rewarding. While this inquest undoubtedly addresses a noted void within the study of Flow Theory and Intrinsic Motivation, of arguably greater value are the practical implications on both the individual and organizational level. In exploring the role of employee perception on motivation, findings from this and subsequent studies would provide invaluable insight for organizations and managers for facilitating employee motivation (and more notably for facilitating intrinsic motivation). Such findings would benefit various disciplines such as leadership and management studies, strategic human resource management, as well as work/life balance and spirituality in the workplace research.

Beyond the practical implications for elevating organizational performance, there are also profound potential gains for individual employees. A goal of this study is to begin a dialogue on how companies can assist in improving the daily experiences of their employees. By empowering employees with self-awareness and helping them release from the shackles of their own mental models – the burdensome and onerous construct that is "work" could be slowly redefined. Rather than viewing *nine-to-five* or *Monday-to-Friday* as obligatory, loathed gaps between enjoyment and happiness, daily work activities could be viewed as enriching exercises marked by personal growth.

With the end-goal of substantive insight for training and development interventions, the present study will address the following hypotheses:

- H<sub>0</sub> Perception of a task as work or as leisure will not affect respondent motivation.
- H<sub>1</sub> Perception of a task as work or as leisure will effect motivation during the task.
- H<sub>2</sub> Results will indicate higher mean motivation levels during perceived leisure activities than perceived work activities.

# **Review of Related Literature**

As the catalyst for the present study, an appropriate starting point is an exploration of Csikszentmihalyi's and LeFevre's *Optimal Experience in Work and Leisure*. Addressing one of the primary research questions, they found that "contrary to expectations, these flowlike situations occurred more than three times as often in work as in leisure," (Csikszentmihalyi & LeFevre, 1989, p. 818). While the article does not offer a substantial overview of all hypotheses maintained by the researchers, the introduction does reference the misconception that leisure is more conducive to flow. The fact that the evidence suggests otherwise is important because it has shaped much of the subsequent research on the topic. In addition, these results shaped the line of inquiry for nearly all of Csikszentmihalyi's subsequent research (Abuhamdeh & Csikszentmihalyi, 2009), and the focus of this investigation.

Researchers continue to debate over the degree to which employee perceptions influence performance and behavior. The *theory of planned behavior* is offered as one construct to reconcile this, and proposes, "intention to perform a behavior is influenced by the person's attitude toward the behavior, his or her subjective norm, and his or her perceived control over perceived difficulty of performing the behavior," (Song, Wanberg, Niu, & Xie, 2006, p. 491). In their 2006 examination of employee culture-based perceptions as motivational predictors, Emery and Oertel offer that two of the most widely recognized motivational theories: McClelland's (1962) Learned Needs Theory and Vroom's (1964) Expectancy Theory, "suggest performance motives reflect persistent characteristics or perceptions of reality," (Emery & Oertel, 2006). In addition, they continue that both Hofstede's and Maslow's theories are also predicated on the fact that employees' perceptions influence motivation (Emery & Oertel, 2006). As the focus of this study is on the specific variable of employee task perceptions, merely acknowledging the existence of perceptions as a moderator for motivation is insufficient. To address this relationship, insight can be gleaned from Deci's and Ryan's (1987) Cognitive Evaluation Theory. As later described by Enzle, Wright, and Redondo (1996), "A central focus of Deci and Ryan's (1987) cognitive evaluation theory is the impact of contextual variables on motivation," (Enzle, Wright, & Redondo, 1996, p. 19). Deci's and Ryan's original focus (as well as continued line of inquest) however, addresses how an employee's self-perceived performance of a task or activity, influences motivation to repeat the same task or activity (Ryan & Deci, 2000).

Other studies have examined the role of perception and variables like autonomy (Enzle, Roggeveen, & Look, 1991; Zuckerman, Porac, Lathin, Smith, & Deci, 1978), and positive performance feedback (Enzle & Ross, 1978; Vallerand & Reid, 1988). Though substantive for performance research, these studies do not address the role of employee task perceptions and motivation specifically. The primary focus of research conducted by Deci and Ryan (1987, 2000), Gagne and Deci (2005), Enzle et. Al. (1991, 1996) and others, continues to be the relationship between external rewards and other externally applied factors on intrinsic motivation. For example, in Gagne's and Deci's 2005 literature review, they describe how, "external factors such as tangible rewards, deadlines (Amabile, DeJong, & Lepper, 1976), surveillance (Lepper & Greene, 1975), and evaluations (Smith, 1975) tend to diminish feelings of autonomy, prompt a change in perceived locus of causality (PLOC) from internal to external (deCharms, 1968; Heider, 1958), and undermine intrinsic motivation," (Gagne & Deci, 2005, p. 332). As the scope of this study does not include external rewards and other externally-derived factors, but rather seeks to address how employee task perception influences motivation – further investigation is warranted. This body of research is however helpful for confirming how social and contextual variables, beyond the confines of a specific task or activity, can impact motivation levels.

Relevant insight is gleaned from Rummell's and Feinberg's (1988) Cognitive Evaluation Theory meta-analysis. The researchers explore how employee perceptions of activities and tasks influence psychological and behavioral outcomes. They propose, "All tasks, besides having a spectrum of objective attributes, have meaning for individuals. Dependent on how these objective attributes are perceived by individuals, the same tasks can be evaluated as either intrinsically or extrinsically motivating or both...It's the same task but its attributes carry different instrumentalities for the individual," (Rummell & Feinberg, 1988, p. 149). This notion of individual task attribution as a determinant of intrinsic versus extrinsic motivation is vital for the present study's hypotheses, as it provides the theoretical foundation for each of the researcher's postulates.

While also focusing on external rewards, Bern (1965) and Lepper et. Al. (1973) integrates perception as a variable (Tang & Baumeister, 1984). In their examination of the "overjustification effect," which argues continued extrinsic rewards negatively affect intrinsic motivation, two psychological processes emerged during their research. "One is a change in selfperception (Bern, 1965). According to this explanation, people perceive themselves performing the task "for" extrinsic benefits and infer that then" intrinsic motivation must therefore be small (Lepper et al., 1973). A second possible process, one with which the present study was concerned, is implied by the phrase "turning play into work"— often used to describe overjustification effects (e.g., Lepper & Greene, 1975)," (Tang & Baumeister, 1984). The implications of these studies are highly relevant to this inquest, as they mark the first real introductions of task perceptions, and the supposed dichotomous relationship between work and play.

Tang's and Baumeister's (1984) research marks one of (if not *the*) first experimental designs to incorporate task labels as the independent variable within an empirical investigation. The researchers concluded, "'turning play into work' by means of explicit labels may increase intrinsic motivation among persons who truly value work," (Tang & Baumeister, 1984, p. 99). While the findings are highly relevant to this study, Tang and Baumeister acknowledge little control for the variable employee perception. Though this and related research seek to answer how others' task-type assignment affects motivation, few answer whether or not how our own perceptions affects motivation. Devoid of control for this potential confounding variable, theoretical implications may be leading practitioners astray. The present study seeks to address this uncertainty; probing deeper into the tangled web of subjective experience.

Various studies attempt to determine the level to which employee perceptions influence task engagement and overall job satisfaction. In their 1987 study, Bateman et. Al. explain a notable divergence in the collective body of research from the job characteristics model (Hackman & Lawler, 1971; Hackman & Oldham, 1976) to the social information processing (SIP) model offered by Salancik and Pfeffer (1978). This model suggests, "individuals' perceptions of and responses to their jobs are caused not only by their evaluations of their tasks but by other information, such as that provided by the social context," (Bateman, Griffin, & Rubinstein, 1987). What is most notable to the present study is the researchers' findings that "an employee's social environment provides cues regarding what dimensions should be used to describe the work environment, how these pertinent dimensions should be weighed, and how others evaluate the work environment on each dimension, and possibly a direct positive or negative evaluation of the work setting," (Bateman, Griffin, & Rubinstein, 1987, p. 89). This argument aligns directly with Csikszentmihalyi's original proposition that motivation, and optimal experience, are directly influenced by how people perceive work tasks due to social cues or constructs (Csikszentmihalyi & LeFevre, 1989).

As the goal of the present study is to begin to lift the proverbial veil on work/leisure motivation, valuable insight is offered in Beatty's and Torbert's *The False Duality of Work and Leisure* (2003). While introducing their research, they begin, "In common parlance, work and leisure are polar opposites, locked permanently in duality; what is work cannot be leisure, and what is leisure cannot be work," (Beatty & Torbert, 2003, p. 239). To expose what is described as a "false duality," the researchers first provide a review of leisure research from the preceding decades. Leisure has been conceptualized as: "an economic choice regarding the investment of free time (Hunnicutt, 1988); a psychological attitude or state of mind (Csikszentmihalyi, 1975); a cultural phenomenon (Riesman, 1950); and an arena of political action and social change (Coalter, 1989; Rojek, 1989)," (Beatty & Torbert, 2003, p. 240).

One point that offers substantive insight for this study is the researchers' argument that leisure is typically codified as whatever is "left-over" after the obligatory functions of "work" have been met or completed. The researchers argue this as problematic, "Because [leisure] then lacks an intrinsic character of its own," (Beatty & Torbert, 2003, p. 240). Three alternative definitions are proposed for leisure: time, activity, and attitude. Beatty and Torbert argue the third, attitude, offers the best framework for defining leisure. Viewing leisure from the lens of attitude, "leisure is distinguished by its voluntary purposiveness, by its inquiring, awareness-enhancing process, and by the developmental outcome it engenders – not by any particular outward form," (Beatty & Torbert, 2003).

This attitude-based definition for leisure is promising because it suggests definitional fluidity. If how an employee perceives a specific task determines its definition, rather than some inherent attribute of the task itself, this suggests perception modification can alter how an employee experiences a task as well. This deductive reasoning is particularly important for the present study due to its implications for facilitating intrinsic motivation (by means of altering or merely acknowledging task perception).

While what constitutes "leisure" is arguably a subjective experience, the social construct of "work" is substantially less ambiguous within the collective body of research. Champoux describes the work sector as, "bounded by an individual's work organization and all of the experiences that flow from membership in that organization," (Champoux, 1978, p. 405). Ransome outlines the contemporary criteria for work, "are that it is a purposeful expedient activity requiring mental and/or physical exertion, carried out in the public domain in exchange for wages," (Beatty & Torbert, 2003, p. 244).

The researchers' analysis of the origins of work as a social construct provides compelling implications for the way it is viewed within contemporary society. They offer, "In modern times we see leisure as the negative of work. Yet in earlier times this relationship was reversed; work was seen as the negative of leisure, and leisure was given primacy...in Greek the negative of *schole* (leisure) was *ascholia* (work). In Latin the word for business (*negotium*) is the negative of leisure (*otium*)," (Beatty & Torbert, 2003, p. 243). Beatty and Torbert argue work's image began to change with the introduction of Protestantism, and the Protestant work ethic; "people began to realize that by working more they could improve their material condition," (Rose, 1985). Though the drive to work has undoubtedly evolved from a moral-calling to an economic-necessity for many, what remains are the obligatory and negative emotions associated with work.

The literature suggests most people view work and leisure as dichotomous states; however, "distinguishing work from leisure is not so easy. There are many examples of activities that conjoin both freedom and necessity, muddying the distinction between pure work and leisure," (Beatty & Torbert, 2003, p. 244). Dumazedier highlights this ambiguity with the term *demi-loisirs*, used to describe activities like gardening, fishing, crafts, and other utilitarian endeavors. The researchers provide additional examples to illustrate how, "Even routine, monotonous work can be voluntarily reframed by workers to include aspects of leisure," citing Roy's (1959) example of "banana time"<sup>1</sup> used by factory workers to reclaim a sense of personal power during work (Beatty & Torbert, 2003).

After an extensive literature review of work and leisure constructs, Beatty and Torbert ultimately conclude that the "action-logic through which a person frames an activity, not the activity itself, determines whether it is leisurely or not. Action-logics are internally coherent systems of beliefs that we may not be fully aware of ourselves, making them especially difficult to transform (Argyris & Schon, 1974; Bacharach, Bamberger, & McKinney, 2000; Wilber, 2000), (Beatty & Torbert, 2003).

A relatively small group of researchers, acknowledging the role of action-logic and employee perception, have sought to determine the level to which outcomes can be moderated by influencing employee task perceptions. Researcher Mary Ann Glynn found that "labeling the same task as work or as play resulted in different configural patterns of cognition, affect, and behavior," (Glynn, 1994, p. 41). Of particular interest to the present study are Glynn's observations between task cues and perceptions with the dependent variable motivation. She

<sup>&</sup>lt;sup>1</sup> Roy, D. F. (1959). "Banana Time: Job Satisfaction and Informal Interaction." Human Organization, 18: 158-168. – Roy describes "Banana Time" as "My account of how one group of machine operators kept from "going nuts" in a situation of monotonous work activity attempts to lay bare the tissues of interaction which made up the content of their adjustment. The talking, fun, and fooling which provided solution to the elemental problem of "psychological survival" will be described according to their embodiment in intra -group relations.

found that, "when individuals performed a task cued as play, they tended to be more intrinsically motivated; to adopt a means orientation to the task; to not violate the rules of the activity; and to make responses that were more organic, elaborated and image laden. When individuals performed the same task cued as work, they tended to be more ends oriented, to demonstrate a concern with monitoring their performance relative to others', and to make responses that were more streamlined and efficient," (Glynn, 1994, pp. 41-42).

Though Glynn's experiment incorporates task cues as an independent variable, whereas the present study does not, the findings support the hypothesis that task label perceptions influence employee motivation. Glynn offers that, "because of minor labeling differences, significant differences in cognitive processing and task outcomes emerged. The study suggests intriguing possibilities for relabeling tasks within organizational settings," (Glynn, 1994, p. 43). Glynn relabeling model offers one potential line of intervention; however, the present study will introduce a promising alternative. Success within Glynn's model resides on the assumption that a superficial label adjustment will suffice in eliciting motivational improvement. The researcher of the present study applies an arguably higher degree of confidence upon individual employees, and argues people will see past such posturing mediations. While the alternative model will be explored further in this summation, the basic underpinning of the proposed intervention is to enlighten employees with the sheer awareness that their perceptions influence their experiences.

Though Glynn's findings are significant for the present study, it is the researcher's call for future research that is particularly intriguing. She offers, "Although in this study I explored the effects of task cues, I described and measured only manifestations of perceptual structures. Clearly, research is needed on how labeling affects perceptual structuring and, in particular, on how task interpretations may occur spontaneously, even in the absence of experimental cues that send the message that 'this is work' or 'this is play,'" (Glynn, 1994, p. 43). The present study seeks to evaluate precisely the environment described by Glynn: in the absence of experimental cues.

In his 1988 study, Sandelands explores how work versus play social cues or signals influence task evaluations and outcomes. Sandelands offers that, "more time was spent in the task when it was signaled to be play and there was some indication of greater responsiveness to the intrinsic motivating potential of the task in this condition as well," (Sandelands, 1988, p. 1041). One conclusion noted in Sandelands' research is the "possibility that social information impacts not only *what* is perceived about a task, but also *how* it is perceived," (Sandelands, 1988, p. 1043).

Though academic and theoretical support exists for further investigation into task perception and motivation, Sandelands touches on one additional (and notable) point of consideration: the practical implications from this vein of research. Sandelands argues, "Any circumstance that favors one or the other type is liable in part for the judgments rendered about it. Moreover, to the extent such circumstances could be managed, there is the prospect that judgments about tasks also could be managed," (Sandelands, 1988, p. 1045). While Sandelands' and others' studies examine primarily the use of social cues and signals to influence others' task perceptions and secondary variables like motivation, the researcher introduces one final elemental yet resounding sentiment: "We use them on ourselves," (Sandelands, 1988, p. 1047).

While offered as a concluding statement in Sandelands' analysis, the majority of the research implications from this and related works seeks to identify channels of managerial intervention for facilitating employee motivation and productivity. The present study marks a shift from the preceding research, in that the ultimate goal is to begin a dialogue on how

employees can become empowered to improve their own daily work experience. By acknowledging self-imposed cues and perceptions upon task types, employees become liberated to shape their own everyday experiences.

Sandelands' acknowledgement of self-imposed constraints and perceived frameworks, while engaging in tasks, bridges the gap between the collective body of (task label, employee perception, and motivation) research with the impetus for the present study. Following Csikszentmihalyi's and LeFevre's proposed line of intervention, "It is highly probable that if people admitted to themselves that work can be very enjoyable – or at least, more enjoyable than most of their leisure time is – they might work more effectively, achieve greater material success, and in the process also improve the quality of their own lives," (Csikszentmihalyi & LeFevre, 1989, p. 821). In an effort to ignite this personal enlightenment of sorts, the present study aims to empirically support that employees' task perceptions influence whether or not they find the experience intrinsically motivating, and as a result – rewarding.

# Method

### **Participants**

Respondents were American professionals recruited via email, Facebook, and LinkedIn. The study was described as an educational inquiry into a topic "relating to organizational behavior and communications." All but two respondents (93.1%) originated from the email invitation, which was sent to 104 individuals (comprised of the researcher's professional, educational, and social networks). Of these, 29 adult working or retired American professionals volunteered to participate (Participation Rate = 27.8%). There were 7 men and 22 women (24.1% and 75.9%, respectively), and respondents' ages ranged from 26 to 70 years (Mean Age = 45.28 years; SD = 14.26). The mean number of full-time work experience years was 17.4, the range was 3 to 41 years (SD = 11.6).

Over two thirds of respondents held bachelor's degrees or post-graduate degrees, with 37.9% holding bachelor's degrees; 31.0% holding post-graduate degrees; and the remaining 9 respondents (31.1%) holding either an associate's degree or having attended "some college" at one point in their life. Respondents' professional industries included: finance/banking/insurance (17.2%); business/professional services (6.8%); retail, consulting, education, utilities, advertising, real estate, manufacturing, media/printing/publishing, market research/public relations, government/military, entertainment/recreation, and other – each constituted less than 5% of the sample's industry types.

While the group represented a diversified sample of American professionals, increasing the sample size during future studies would aid in the generalizability for the present study's findings. In addition, while the researcher's used availability sampling, future studies would benefit from the use of random sampling or other probability sampling methods.

# Measures

The Perceived Task-Type / Motivation Instrument was used (PTTMI) to measure both the dependent and independent variables. The PTTMI, while original and constructed by the researcher specifically for this study, was modeled after multiple previously used and peerreviewed instruments. Activity and question design and content was inspired by instruments such as: the Work-Preference Inventory (Amabile, 1994); Susan Harter's (1981) Scale of Intrinsic and Extrinsic Motivation; the Original Climate Scale (deCharms, 1968); the General Causality Orientations Scale (Deci & Ryan, 1985); and others. Prior to launching the study, focus group testing was used both for feasibility, reliability, and validity testing. Testing consisted of three rounds, with three to five respondents in each round. Round one respondents included three women and one man (ages: 26, 27, 33, 64; M=37.5; SD=17.94). Post-test data was collected via qualitative research; the researcher interviewed respondents immediately after completing the instrument.

The majority of round one feedback was comprised of comments pertaining to the instructional copy found throughout the questionnaire. For example, respondent A.2 offered, "I liked it but was confused I guess by some of the wording...I think it should say something like 'would completing these activities be considered work or leisure,' instead of just 'would these activities' because you see the first question and you don't quite understand the word activity."" Respondent A.4 advised, "The first activity was a percentage question about the price of an electronic or something, right? At first I was like...would buying the thing on sale be considered work? After I re-read the instructions a few times I finally got it, but I think it's just a small language thing – but I noticed it." After reviewing all round one respondent feedback, the

instrument was modified with the goal of improving respondent clarity for each of the section directives.

Round two instrument testing was comprised of three women (ages, 24, 27, 27; M=26; SD=1.73). Whereas round one respondents completed the questionnaire independently (via emailed link); for round two – respondents each completed the questionnaire while in the same room as the researcher. Each was advised to raise their hand while completing the instrument, if they ever felt confused or felt a directive was unclear. The goal of this simulation was to optimize respondent ease-of-use with the hopes of increasing the study's participation rate.

After incorporating revisions gleaned from round two testing, round three consisted of an instrument review by three field-related scholars from the New York University faculty. Substantive insight was provided by each of the faculty respondents. For example, respondent C.3 advised, "What out for the sequencing effect – you may want to vary the order in which the leisure tasks and work tasks are completed." Referring to the demographic questions in section four, respondent C.1 offered, "You will need to code that info – remember that – so asking "year of birth" will make that more difficult. If you can change that to age groups it will be easier to code. You want to look for trends/groupings etc., not specific information."

A sampling of additional suggestions from respondent C.1 included: modifying the motivation Likert scales from 7-point to 5-point; unifying question visual-design and layout through the use of colorization; amalgamating disparate vocabulary into cohesive terms used consistently (eg. question, exercise, and activity); and rewording instructional copy for improving respondent understanding. For a comprehensive overview of the PTTMI, including instrument coding and pre- and post-hoc instrument testing please see Exhibit F.

# Procedure

A web-based questionnaire including separate indices for perceived task-type, work-task motivation, leisure-task motivation, non-task ("global") work motivation, as well as basic demographic questions, was administered via email invitation and social-networking site postings. Upon clicking the questionnaire HTML link, respondents were: (1) provided an overview of the process; (2) presented information about estimated participation time; (3) provided privacy statement information, acknowledging that all data collected was anonymous; and finally, (4) respondents were given instructions regarding site navigation. As focus-group instrument testing indicated respondents felt overwhelmed by copious text instructions, a questionnaire workflow graphic was used to visually outline the process steps (see Exhibit F).

The instrument was divided into four sections: I. Task-Type Label Assignment; II. Respondent-Perceived Work Activities and Work Motivation Scale; III. Respondent-Perceived Leisure Activities and Leisure Motivation Scale; and IV. Demographic Questions and Non-Task Work ("Global") Motivation Scale.

Activity content, structure, and layout were modeled after previously used, peer-reviewed instrument content. For example, the Soma Cube / Puzzle activities (Deci, 1971, 1972, 1976; Enzle & Ross, 1978; Williams, 1980); pictorial exercises (Lepper, Greene & Nisbett, 1973); geometry questions and activities (Kruglanski et. Al., 1971; Pinder, 1976); as well as content typically found on standardized tests such as the SAT, GRE, and GMAT (Kaplan, 2011). As studies suggest question and activity color can influence participant perception and performance, all activities within the PTTMI were colorized to control for this intervening variable (Hoadley, 1990; Benbasat, Dexter, & Todd, 1986) For additional information see Exhibit F.

For each activity in Section I, respondents were instructed, "Do not complete the activity - review the content and assign a label." This instructional copy appeared above every activity. Images of the activity and corresponding answer fields were presented in graphical format. Respondents were provided two radio button options to complete the following statement: "I would consider the following activity to be..."; the answer choices available were work and leisure.

Sections II and III were customized for each respondent, based on their task-type assignment for each activity in Section I. Respondents first completed activities they had labeled as work (ranging from 1 to 8 activities). Upon completing the assigned work activities, respondents completed a 5-point Likert motivation scale (1 = Strongly Disagree and 5 = Strongly*Agree*) after given the following instructions: "You labeled the preceding activities WORK – please use your experience with the WORK activities to complete the following scale."

The thirteen scale questions were modeled after content used in previously-validated instruments, including Amabile's (1994) Work-Preference Inventory; Susan Harter's (1981) Scale of Intrinsic and Extrinsic Motivation; The Origin Climate Scale (deCharms, 1968); Deci's and Ryan's (1985) General Causality Orientations Scale; as well as content from multiple other studies (Glynn, 1994; Csikszentmihalyi & LeFevre, 1983). Each of the thirteen scale questions were pre-assigned motivation values as either intrinsically or extrinsically oriented. The activity completion and scale process was replicated in Section III for the respondent's perceived leisure activities.

Section IV was comprised of demographic questions, as well as a non-task specific work motivation 5-point Likert scale (1 = *Strongly Disagree* and 5 = *Strongly Agree*). Instruction was provided that, "The following items are <u>not related to the activities just completed</u> but instead

should be answered in the context of your daily experience <u>AT WORK</u>." Respondents were then given the prompt, "At WORK, my primary motivation is..." and asked to complete the seven question scale. Question content and value-assignment was also modeled after previously used instruments.

While previous studies have shown positive correlations between externally-derived tasktype cues and motivation, the primary goal of the present study is to empirically support that self-imposed task-type labels share a similar effect. Non-task specific ("global") motivation was measured for exploratory purposes and for the implications for future studies. If the present study supports that perceived work tasks are less positively correlated with motivation than perceived leisure tasks – the implications for perceptive self-intervention are boundless.

# **Results - Data**

# **Respondent Task-Label Assignment Data**

Section I consisted of nine activities and required respondents to select a radio-button option of either work or leisure - based on the prompt, "I would consider the following activity to be..."

- Activity No. 1 (TA1) asked about the sales price of a copy machine and presented 5 multiple-choice options for the original price. 20.69% (f=6) of respondents labeled the activity leisure and 79.31% (f=23) labeled the activity work.
- Activity No. 2 (TA2) presented a brief cartoon video-clip about shapes and colors and included questions about the video's content. 79.31% (f=23) of respondents labeled the activity leisure and 23.69% (f=6) labeled the activity work.
- Activity No. 3 (TA3) consisted of a sentence correction exercise. 24.14% (f=7) of respondents labeled the activity leisure and 75.86% (f=22) labeled the activity work.
- Activity No. 4 (TA4) presented a brief cartoon video-clip about elementary U.S. government and included questions about the video's content. 55.17% (f=16) labeled the activity leisure and 44.82% (f=13) labeled the activity work.
- Activity No. 5 (TA5) included a paragraph of copy on the topic of plastic surgery trends, as well as multiple choice-questions pertaining to the content. 48.27% (f=14) labeled the activity leisure and 51.72% (f=15) labeled the activity work.
- Activity No. 6 (TA6) included a geometric puzzle involving identifying pairs. 62.06% (f=18) labeled the activity leisure and 37.93% (f=11) labeled the activity work.

- Activity No. 7 (TA7) presented a basic profit/cost word problem with five multiplechoice answers. 20.69% (f=6) of respondents labeled the activity leisure and 79.31% (f=23).
- Activity No. 8 (TA8) presented six word/graphic phrase puzzles to decipher. 86.20% (f=25) of respondents labeled the activity leisure and 13.79% (f=4) labeled the activity work.
- Activity No. 9 (TA9) consisted of 5 geography anagrams. 68.96% (f=20) of respondents labeled the activity leisure and 31.03% (f=9) labeled the activity work.

 Table 1

 Summary Statistics: Respondent Task Label Assignment

	No. of observations	No. of missing values	Sum of weights	No. of categories	Mode	M ode frequency	Category	Frequency per category	Rel. frequency per category (%)
TA1	29	0	29	2	W	23	L	6.000	20.690
							W	23.000	79.310
TA2	29	0	29	2	L	23	L	23.000	79.310
							W	6.000	20.690
TA3	29	0	29	2	W	22	L	7.000	24.138
							W	22.000	75.862
TA4	29	0	29	2	L	16	L	16.000	55.172
							W	13.000	44.828
TA5	29	0	29	2	W	15	L	14.000	48.276
							W	15.000	51.724
TA6	29	0	29	2	L	18	L	18.000	62.069
							W	11.000	37.931
TA7	29	0	29	2	W	23	L	6.000	20.690
							W	23.000	79.310
TA8	29	0	29	2	L	25	L	25.000	86.207
							W	4.000	13.793
TA9	29	0	29	2	L	20	L	20.000	68.966
							W	9.000	31.034

# Primary Motivation Scale (WMS & LMS) Data

Sections II and III consisted of completing the activities respondents labeled as work and leisure, respectively. At the end of each section respondents were required to complete a 5-point Likert scale to determine motivation during the preceding activities. The majority of respondents, twenty out of twenty-nine, reported higher motivation levels during leisure activities. Of the remaining nine respondents, seven reported higher motivation levels during work activities, and two reported the same motivation levels for leisure activities and work activities.

Table 2Summary Statistics: LMS & WMS

Variable	Observations	Obs. with missing data	Minimum	Maximum	Mean	Std. deviation
LMS	29	0	25.000	53.000	45.138	5.957
WMS	29	0	32.000	52.000	41.276	5.182

Table 3

Descriptive statistics for the intervals (WMS):

Table 4

Descriptive statistics for the intervals (LMS):

F				r					
Lower bound	Upper bound	Frequency	Relative frequency	Density	Lower bound	Upper bound	Frequency	Relative frequency	Density
30	32.3	2	0.069	0.030	20	23.4	0	0.000	0.000
32.3	34.6	1	0.034	0.015	23.4	26.8	1	0.034	0.010
34.6	36.9	3	0.103	0.045	26.8	30.2	0	0.000	0.000
36.9	39.2	5	0.172	0.075	30.2	33.6	0	0.000	0.000
39.2	41.5	3	0.103	0.045	33.6	37	0	0.000	0.000
41.5	43.8	5	0.172	0.075	37	40.4	4	0.138	0.041
43.8	46.1	6	0.207	0.090	40.4	43.8	5	0.172	0.051
46.1	48.4	1	0.034	0.015	43.8	47.2	8	0.276	0.081
48.4	50.7	2	0.069	0.030	47.2	50.6	6	0.207	0.061
50.7	53	1	0.034	0.015	50.6	54	5	0.172	0.051

Hypothesis testing was conducted using repeated measures and paired t-tests. A normal distribution was assumed for the purposes of analysis. The two-tailed p-value equaled 0.006996 ( $\alpha$ =0.05, t=2.9108, DF=28, SED=1.327). The mean of WMS minus LMS equaled -3.86; 95% confidence interval of this difference is from -6.58 to -1.14.

Internal validity testing was conducted using Sign two-tailed testing and Wilcoxon signed-rank two-tailed testing. The Sign test two-tailed p-value equaled 0.019 ( $\alpha$ =0.05). The Wilcoxon signed-rank two-tailed test p-value equaled 0.006 ( $\alpha$ =0.05). Type II error ( $\beta$ ) and power testing was conducted using paired-sample z-testing (exploratory);  $\beta$ =0.251, power = 0.749. Two-sample Kolmogorov-Smirnov two-tailed testing was also used for internal validity purposes. The Kolmogorov-Smirnov p-value equaled 0.048 ( $\alpha$ =0.05, D=0.345).

Table 5	
Sign test / Two-tailed test:	
N+	20
Expected value	13.500
Variance (N+)	6.750
p-value (Two-tailed)	0.019
alpha	0.05

The p-value is computed using an exact method.

Table 7

Two-sample Kolmogoro	v-Smirnov test / Two-tailed test:
D	0.345
p-value	0.048
alpha	0.05

#### Table 8

Predictive	Validity	test	results:
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	LMS	WMS
R <sup>2</sup>	0.262	0.144
F	54.722	32.771
<b>Pr</b> > <b>F</b>	< 0.0001	< 0.0001

 Table 6

 Wilcoxon signed-rank test / Two-tailed test:

V	304.500
Expected value	189.000
Variance (V)	1724.750
p-value (Two-tailed)	0.006
alpha	0.05

An approximation has been used to compute the *p*-value.

Predictive validity testing was conducted to determine the coefficient of determination value ( $R^2$ ) and for goodness of fit analysis;  $R^2(LMS)=0.262$  [F(LMS)=54.722] and  $R^2(WMS)=0.144$  [F(LMS)=32.7221].

Post-hoc statistical power testing was also conducted on t-test results. For the given parameters ( $\alpha$ =0.05, N=29) the type II error ( $\beta$ ) equaled 0.15 and the power is 0.85. The observed effect size (Cohen's d) equaled 0.6914 ( $\alpha$ =0.05, N=29). Using these parameter values the observed power equaled 0.55407 (one-tailed), and 0.4191 (two-tailed). The critical Chi-Square value (X<sup>2</sup>) equaled 41.3371 (DF=28; p=0.05). Additional power testing was conducted to determine the variance within WMS scores and within LMS scores. Intraclass correlation testing was conducted using ANOVA; WMS = 0.0441, LMS = 0.0888. Using the covariance between WMS and LMS (Cov = 5.6392), Pearson correlation coefficient r = 0.1859.

#### Table 9

Exploratory Supplemental Data Analysis	
Test	Result
CDF for t-Distribution	.9965 (DF=28, t=2.9108)
Post-Hoc Statistical Power (One-Tail)	0.55405869
Post-Hoc Statistical Power (One-Tail)	0.41906823
Effect Size (Cohen's D)	0.69138902
Critical F-Value (ANOVA)	1.55407398

# **Secondary Motivation Scale Data**

For exploratory purposes and implications for subsequent research motivational scales measured three secondary motivational subscales: enjoyment orientation, challenge orientation, and outward orientation. Subscale design and content was inspired by various past studies (Lepper, 1980; Harter, 1981; Deci, 1975 & Amabile et. Al., 1994). Enjoyment orientation subscale items ascertained the degree to which respondents were motivated by enjoying the activity in question; seeing the value of an activity as a learning experience despite the outcome; and appreciation for exploring new content and new experiences. Challenge orientation subscale items collected respondent data on whether they were motivated by hard, or challenging questions; sought to learn and grow by pushing themselves during difficult activities; and found previously unmastered content interesting. Outward orientation subscale items were designed as indicators for reward-dependent (extrinsic) motivation. For example, recognition as a motivational derivative; valence assigned to the comparison of their scores to others' scores; and motivational dystrophy in the absence of ongoing feedback or rewards.

Two out of the three secondary motivation scales, enjoyment orientation and challenge orientation, indicated statistically significant variation between work activities and leisure activities. Outward orientation values were statistically equivalent during work activities and leisure activities. See Table 10 for the mean, sample size, and standard deviation of respondents' secondary motivation subscale values.

#### Table 10

	Primary N	Aotivation		Secondary Motivation				
	LMS	WMS	EW	EL	CW	CL	OW	OL
No. of observations	29	29	29	29	29	29	29	29
Minimum	25.000	32.000	8.000	6.000	14.000	9.000	4.000	3.000
M aximum	53.000	52.000	19.000	20.000	26.000	30.000	8.000	8.000
1st Quartile	42.000	38.000	12.000	15.000	18.000	20.000	6.000	6.000
Median	45.000	42.000	14.000	16.000	20.000	22.000	6.000	6.000
3rd Quartile	49.000	44.000	15.000	18.000	22.000	24.000	7.000	6.000
Mean	45.138	41.276	13.345	15.517	19.621	21.897	6.172	6.103
Variance (n-1)	35.480	26.850	7.091	8.830	8.958	16.596	0.576	1.239
Standard deviation (n-1)	5.957	5.182	2.663	2.972	2.993	4.074	0.759	1.113

Exploratory Supplemental Data Analysi	<i>Exploratory</i>	Supplemental	Data Analys	is
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# Non-Task Specific (Global) Motivation Scale Data

Respondents' reported the strongest "At Work" motivator as "to achieve my goals," with 93.1% either agreeing or strongly agreeing with the statement (RS: 127/145). The second

strongest motivator was "to achieve a sense of accomplishment," with 89.66% either agreeing or strongly agreeing with the statement (RS: 125/145). 75.87% of respondents either agreed or strongly agreed with the statement that "the job itself / the work itself" (RS: 118/145). Nearly two-thirds (65.51%) of respondents either agreed or strongly agreed with the statement "to receive my paycheck," (RS: 108/145). The majority of respondents either disagreed or strongly disagreed with the statements "to receive recognition from others," and "to receive a job promotion," (RS: 98, RS: 98, respectively).

# Normality and Distribution Testing Data

Normality and distribution testing was also conducted for each primary and secondary motivation score value subset.

#### Table 11

Primary and Secondary Motivation Scale Skewness and Kurtosis Tests

	SD Statistic	Var. Statistic	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Work Motivation	5.182	26.85	0.029	0.434	-0.465	0.845
Leisure Motivation	5.957	35.48	-1.216	0.434	3.261	0.845
WMS-Enjoyment	2.663	7.091	-0.107	0.434	-0.086	0.845
WMS-Challenge	2.993	8.958	0.009	0.434	-0.22	0.845
WMS-Outward	0.759	0.576	-0.306	0.434	2.047	0.845
LMS-Enjoyment	2.972	8.83	-1.133	0.434	2.485	0.845
LMS-Challenge	4.074	16.596	-0.781	0.434	2.5	0.845
LMS-Outward	1.113	1.239	-0.384	0.434	1.566	0.845

For additional data analyses, including supplemental tables and charts, please see Exhibit E.

# **Results - Analysis**

The explanatory variable, subjective task-type assignment was shown to have a statistically significant effect on the response variable, motivation. Hypothesis testing indicated respondents' mean motivation was higher during perceived leisure activities than perceived work

activities, t(2.9108) = .0070, p < .05, two-tailed, df(28), CDF(0.5028). By conventional criteria, the difference between the two groups is considered to be very statistically significant. Accordingly, the null hypothesis is rejected (H<sub>0</sub>: no positive correlation between task-type perception and motivation).

Further hypothesis support is provided by the Sign two-tailed test Wilcoxon signed-rank two-tailed test results. For the former, as the p-value is lower than the significance level ( $\alpha$ =0.05), the null hypothesis (H<sub>0</sub>) is rejected and the alternative hypothesis (H<sub>1</sub>) can be accepted. The risk to reject the null hypothesis (H<sub>0</sub>) while it is true is lower than 1.92%. For the latter, as the p-value is lower than the significance level ( $\alpha$ =0.05), the null hypothesis (H<sub>0</sub>) is rejected and the alternative hypothesis (H<sub>1</sub>) can be accepted. The risk to reject the null hypothesis (H<sub>0</sub>) while it is true is lower than 0.56%.

# Discussion

Rationally, the notion that people find leisure activities more motivating may not appear ground-breaking; however, no previous inquest has confirmed this concept empirically prior to the present investigation. While evaluating this statement, reasonable queries may arise such as: Does the data actually support the researcher's claims? What does this tell us? Why should we care about these findings? Where do we go from here?

To address the first question, ultimately weighing the study's internal validity, consideration is warranted for the control afforded by the distinctive design employed. As the explanatory variable was determined by the respondent, there was greater control than is typically found within a quasi-experimental design. While the researcher makes no definitive causal claims between the two investigated variables, the statistical significance of the correlation testing cannot be underrated or overlooked. Upon even a cautious level of agreement, consider next the pragmatic corollaries in considering the general assessment of these findings.

What do positive correlations between individual task perception and motivation even suggest? Why does this matter? Whereas previous research has isolated the task itself as the primary focus for practical intervention, the present study implores onlookers to consider a cognitive shift of sorts. In the past, organizational intervention focused on task redesign, task relabeling, or complex process reengineering. As notable divergence, the present study's findings bellow to forget such past technical adjustments, and invite practitioners to consider a more elemental, human approach. What if, for example, merely educating employees on the relationship between perception and motivation improved succeeding task motivation levels? While further examination addressing this and related postulates are undoubtedly warranted, consider the financial and human resource efficiencies of such a program. Within the antiquated task-centric lines of intervention, how are organizations to optimize design for the greatest number of employees? Must managers serve dual-roles as both psychologists, to assess individual employee valence; and scientists, to employ predictive modeling of what tasks will motivate future employees? How exhausting. In addition, no task-based mediation, regardless of proactive and strategic planning, can serve as motivational accelerator for *all* employees. This endeavor for motivational utilitarianism is futile in the long-term, as with time all programs will undoubtedly shift from motivation- to hygiene-factors (Robbins & Judge, 2009). In contrast, an *enlightenment-based* approach empowers employees with the tools to become their own personal change-agents; integrated SRM and managerial programs could offer ongoing support, assisting employees in identifying and confronting perceptive *obstacles*. The performance and engagement implications appear limitless.

Perhaps such an organizational environment is imaginable; however (for the time-being at least), let us bring our feet back to the ground and explore potential future designs to facilitate the proposed employee *utopia*. Further examination is warranted to explore the generalizability of the present study's findings. The researcher acknowledges external validity limitations based on sample size and general design scale. Upon attainment of foundational reliability support, subsequent examination is necessary that introduces educational intervention. For example, one model could employ control and experimental groups, with the latter receiving a pre-test lesson about the relationship between task perception and motivation. Similarly, an action-research based study could explore how casual managerial feedback on task-perception and motivation affects employee motivation and performance. Implications from the present study could also be used to reevaluate past conclusions from social cues and task-label research. These exploratory designs represent just a sampling of a seemingly limitless body of potential research.

While the study's results affirmed all hypotheses, the researcher acknowledges certain limitations within the proposed vein of research. Despite positive findings and substantive implications, the conclusion is not that merely educating employees as to the paradoxical relationship will suffice as an end-all solution for motivating employees. Rather, the goal of the present study is to begin a discussion within the dialogue of employee motivation; to elevate the collective consciousness of practitioners and employees alike. To that end – a concluding thought from psychiatrist and social scientist Carl G. Jung: "Man's task is to become conscious of the contents that press upward from the unconscious...when an inner situation is not made conscious, it appears as fate. It all depends on how we look at things, and not how they are in themselves," (Jung, 1957).

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WMS - Work Motivation Sca	0			
E:Enjoyment; Ch:Challenge; O:Outwa	rd / R:Reverse Primary		Secondary	
	Low:High EM:IM	Ε	Ch	0
1. I enjoyed completing these activities	X	Х		
2. I found the activities challenging	Х		Х	
B. The activities made me think in different ways	Х		Х	
4. It was satisfying to find the answer	Х	Х		
5. I enjoyed completing the activities on my own	Х	Х		
6. I preferred the more difficult activities	Х		Х	
7. I believe these activities could be of some value to me	Х	Х		
3. After working at these activities for a while, I felt pretty competent	Х		Х	
D. While completing these activities, I was able to persist to the completion of he exercises	х		х	
0. I felt that I couldn't do very well on these activities	R		R	
11. Doing well on these activities was important to me	R		Х	
12. I am curious about how I did on these activities relative to others	R			Х
13. I am not concerned about the score I received on these activities	Х			Х
LMS - Leisure Motivation Sc	ale Scoring			
E:Enjoyment; Ch:Challenge; O:Outwa				
	Primary		Secondary	
	Low:High		CI	0
	EM:IM	E	Ch	0
. I enjoyed completing these activities	Х	Х		
2. I found the activities challenging	Х		Х	
B. The activities made me think in different ways	Х		Х	
4. It was satisfying to find the answer	Х	Х		
5. I enjoyed completing the activities on my own	Х	Х		
6. I preferred the more difficult activities	Х		Х	
7. I believe these activities could be of some value to me	Х	Х		
3. After working at these activities for a while, I felt pretty competent	Х		Х	
D. While completing these activities, I was able to persist to the completion of the exercises	х		х	
10. I felt that I couldn't do very well on these activities	R		R	
11. Doing well on these activities was important to me	R		Х	
12. I am curious about how I did on these activities relative to others	R			Х
3. I am not concerned about the score I received on these activities	Х			Х
GMS - Global Motivation Sca	ale Scoring			
E:Enjoyment; Ch:Challenge; O:Outwa	rd / R:Reverse			
	Primary		Secondary	
	Low:High EM:IM	E	Ch	0
o achieve a sense of accomplishment.	Х	Х		
o achieve my goals.	Х		Х	
o receive recognition from others.	R			Х
o receive my paycheck.	R			Х
o receive a job promotion.	R			Х
he job itself / the work itself.	Х	Х		
I'm not sure what motivates me at work.	_	_		l _

## **Exhibit A: Motivation Scale Coding**

### Exhibit B: Respondent WMS Scale Data

You labeled the preceding activities WORK please use your experience with the WORK activities to complete the following scale:

		1	2	3	4	5	
		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Total
1.	I enjoyed completing these activities	<b>3.4%</b>	<b>37.9%</b>	<b>31.0%</b> 9	<b>24.1%</b> 7	<b>3.4%</b> 1	<b>100%</b> 29
2.	I found the activities challenging	<b>0.0%</b> 0	<b>10.3%</b> 3	<b>24.1%</b> 7	<b>41.4%</b> 12	<b>24.1%</b> 7	<b>100%</b> 29
3.	The activities made me think in different ways	<b>3.4%</b>	<b>13.8%</b> 4	<b>31.0%</b> 9	<b>37.9%</b>	<b>13.8%</b> 4	<b>100%</b> 29
4.	It was satisfying to find the answer	<b>0.0%</b> 0	<b>13.8%</b> 4	<b>10.3%</b> 3	<b>55.2%</b> 16	<b>20.7%</b> 6	<b>100%</b> 29
5.	I enjoyed completing the activities on my own	<b>0.0%</b> 0	<b>13.8%</b> 4	<b>41.4%</b> 12	<b>34.5%</b> 10	<b>10.3%</b> 3	<b>100%</b> 29
6.	I preferred the more difficult activities	<b>6.9%</b> 2	<b>24.1%</b> 7	<b>48.3%</b> 14	<b>10.3%</b> 3	<b>10.3%</b> 3	<b>100%</b> 29
7.	I believe these activities could be of some value to me	<b>3.4%</b>	<b>13.8%</b> 4	<b>34.5%</b> 10	<b>37.9%</b>	<b>10.3%</b> 3	<b>100%</b> 29
8.	After working at these activities for a while, I felt pretty competent	<b>3.4%</b>	<b>20.7%</b> 6	<b>41.4%</b> 12	<b>31.0%</b> 9	<b>3.4%</b> 1	<b>100%</b> 29
9.	While completing these activities, I was able to persist to the completion of the exercises	<b>0.0%</b> 0	<b>24.1%</b> 7	<b>27.6%</b> 8	<b>41.4%</b> 12	<b>6.9%</b> 2	<b>100%</b> 29
10.	I felt that I couldn't do very well on these activities	<b>13.8%</b> 4	<b>20.7%</b> 6	<b>24.1%</b> 7	<b>37.9%</b>	<b>3.4%</b> 1	<b>100%</b> 29
11.	Doing well on these activities was important to me	<b>3.4%</b>	<b>13.8%</b> 4	<b>27.6%</b> 8	<b>48.3%</b> 14	<b>6.9%</b> 2	<b>100%</b> 29
12.	I am curious about how I did on these activities relative to others	<b>3.4%</b>	<b>13.8%</b> 4	<b>37.9%</b>	<b>41.4%</b> 12	<b>3.4%</b> 1	<b>100%</b> 29
13.	I am not concerned about the score I received on these activities	<b>0.0%</b>	<b>31.0%</b> 9	<b>41.4%</b> 12	<b>20.7%</b> 6	<b>6.9%</b> 2	<b>100%</b> 29

### Exhibit C: Respondent LMS Scale Data

You labeled the preceding activities LEISURE please use your experience with the LEISURE activities to complete the following scale:

		1	2	3	4	5	
		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Total
1.	I enjoyed completing these activities	<b>0.0%</b>	<b>3.4%</b>	<b>13.8%</b> 4	<b>37.9%</b>	<b>44.8%</b> 13	<b>100%</b> 29
2.	I found the activities challenging	<b>10.3%</b> 3	<b>3.4%</b>	<b>24.1%</b> 7	<b>41.4%</b> 12	<b>20.7%</b> 6	<b>100%</b> 29
3.	The activities made me think in different ways	<b>3.4%</b>	<b>3.4%</b>	<b>13.8%</b> 4	<b>58.6%</b> 17	<b>20.7%</b> 6	<b>100%</b> 29
4.	It was satisfying to find the answer	<b>3.4%</b>	<b>3.4%</b>	<b>10.3%</b> 3	<b>44.8%</b> 13	<b>37.9%</b> 11	<b>100%</b> 29
5.	I enjoyed completing the activities on my own	<b>3.4%</b>	<b>0.0%</b>	<b>31.0%</b> 9	<b>37.9%</b>	<b>27.6%</b> 8	<b>100%</b> 29
6.	I preferred the more difficult activities	<b>3.4%</b>	<b>10.3%</b>	<b>31.0%</b> 9	<b>31.0%</b> 9	<b>24.1%</b> 7	100% 29
7.	I believe these activities could be of some value to me	<b>3.4%</b>	<b>3.4%</b>	<b>44.8%</b> 13	<b>37.9%</b>	<b>10.3%</b> 3	100% 29
8.	After working at these activities for a while, I felt pretty competent	<b>0.0%</b> 0	<b>3.4%</b>	<b>41.4%</b> 12	<b>31.0%</b> 9	<b>24.1%</b> 7	100% 29
9.	While completing these activities, I was able to persist to the completion of the exercises	<b>0.0%</b> 0	<b>13.8%</b> 4	<b>24.1%</b> 7	<b>37.9%</b>	<b>24.1%</b> 7	<b>100%</b> 29
10.	I felt that I couldn't do very well on these activities	<b>20.7%</b> 6	<b>27.6%</b> 8	<b>37.9%</b>	<b>10.3%</b> 3	<b>3.4%</b>	100% 29
11.	Doing well on these activities was important to me	<b>3.4%</b>	<b>6.9%</b> 2	<b>31.0%</b> 9	<b>44.8%</b> 13	<b>13.8%</b> 4	100% 29
12.	I am curious about how I did on these activities relative to others	<b>0.0%</b>	<b>10.3%</b>	<b>37.9%</b>	<b>41.4%</b> 12	<b>10.3%</b> 3	100% 29
13.	I am not concerned about the score I received on these activities	<b>10.3%</b> 3	<b>37.9%</b>	<b>31.0%</b> 9	<b>10.3%</b> 3	<b>10.3%</b> 3	<b>100%</b> 29

ID	G1	G2	G3	G4	G5	G6	G7
R1	4	4	4	4	4	4	3
R2	5	5	3	3	4	3	1
R3	4	5	1	1	1	5	1
R4	4	4	2	5	5	4	2
R5	5	5	3	3	3	3	1
R6	5	5	5	3	3	5	1
R7	4	5	5	1	4	3	4
R8	4	4	4	4	4	3	5
R9	5	5	4	5	3	5	1
R10	3	4	3	4	2	4	3
R11	3	3	3	5	3	3	3
R12	4	4	5	3	3	3	2
R13	5	5	4	5	4	5	2
R14	4	4	4	4	4	4	3
R15	3	4	2	4	2	3	2
R16	5	3	3	3	3	5	1
R17	4	4	3	5	3	4	3
R18	5	5	3	5	5	5	1
R19	4	4	3	4	3	4	1
R20	4	4	3	2	2	4	2
R21	4	4	3	2	2	5	1
R22	5	5	3	4	5	4	1
R23	5	5	3	4	3	4	1
R24	5	5	2	4	2	5	1
R25	4	4	3	5	5	5	2
R26	5	5	5	3	3	3	3
R27	4	4	3	4	4	4	1
R28	4	4	4	4	4	4	3
R29	5	5	5	5	5	5	1

### Exhibit D: Respondent GMS Scale Data

G1: to achieve a sense of accomplishment; G2: to achieve my goals; G3: to receive recognition from others; G4: to receive my paycheck; G5: to receive a job promotion; G6: the job itself / the work itself; G7: I'm not sure what motivates me

GMS Respondent Data

					Boo	tstrap <sup>a</sup>	
						95% Confide	nce Interval
	_	Statistic	Std. Error	Bias	Std. Error	Lower	Upper
Work Motivation Scale	N	29		0	0	29	29
	Range	20					
	Minimum	32					
	Maximum	52					
	Mean Std. Deviation	41.28 5.182	.962	03 139	.92 .590	39.31 3.972	43.10 6.168
	Variance	26.850		-1.070	5.983	15.778	38.041
	Skewness Kurtosis	.029 465	.434 .845	031 .042	.308 .525	651 -1.208	.573 .891
Leisure Motivation	Ν	29		0	0	29	29
	Range	28					
	Minimum	25					
	Maximum	53					
	Mean Std. Deviation	45.14 5.957	1.106	06 198	1.09 1.156	42.86 3.958	47.17 8.103
	Variance	35.480		981	13.774	15.663	65.660
	Skewness Kurtosis	-1.216 3.261	.434 .845	.429 -1.710	.743 2.237	-1.798 -1.466	.539 5.538
WMS-Enjoyment	Ν	29		0	0	29	29
	Range	11					
	Minimum	8					
	Maximum	19					
	Mean Std. Deviation	13.34 2.663	.494	01 069	.48 .321	12.38 1.935	14.27 3.235
	Variance	7.091		257	1.657	3.743	10.462
	Skewness Kurtosis	107 086	.434 .845	011 037	.359 .568	844 -1.077	.617 1.185
WMS-Challenge	Ν	29		0	0	29	29
	Range	12					
	Minimum	14					
	Maximum	26					
	Mean Std. Deviation	19.62 2.993	.556	03 089	.54 .351	18.52 2.198	20.69 3.549
	Variance	8.958		402	2.051	4.833	12.598
	Skewness Kurtosis	.009 220	.434 .845	017 .038	.322 .595	657 -1.061	.628 1.292
WMS-Outward	Ν	29		0	0	29	29
	Range	4					
	Minimum	4					
	Maximum	8					

# Exhibit E: Supplemental Data Analysis

	Mean Std. Deviation	6.17 .759	.141	.01 019	.14 .131	5.90 .489	6.45 .996
	Variance	.576		012	.194	.239	.993
	Skewness Kurtosis	306 2.047	.434 .845	.163 529	.708 1.370	-1.232 590	1.391 4.847
LMS-Enjoyment	N	2.047	.0+0.	52)	0	570	29
	Range	14					
	Minimum	6					
	Maximum	20					
	Mean Std. Deviation	15.52 2.972	.552	04 083	.53 .541	14.38 1.921	16.52 3.931
	Variance	8.830		195	3.181	3.690	15.455
	Skewness Kurtosis	-1.133 2.485	.434 .845	.292. -1.099	.588 1.826	-1.876 -1.056	.236 5.939
LMS-Challenge	Ν	29		0	0	29	29
	Range	21					
	Minimum	9					
	Maximum	30					
	Mean Std. Deviation	21.90 4.074	.756	05 130	.76 .739	20.34 2.633	23.34 5.441
	Variance	16.596		499	6.000	6.934	29.604
	Skewness Kurtosis	781 2.500	.434 .845	.300 -1.060	.735 1.698	-1.626 -1.102	.845 4.956
LMS-Outward	Ν	29		0	0	29	29
	Range	5					
	Minimum	3					
	Maximum	8					
	Mean Std. Deviation	6.10 1.113	.207	.00 025	.20 .177	5.72 .743	6.52 1.432
	Variance	1.239		024	.386	.552	2.052
	Skewness Kurtosis	384 1.566	.434 .845	.147 194	.591 1.398	-1.172 656	1.177 4.741
Valid N (listwise)	N	29		0	0	29	29
							1

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Variables	LMS	WMS
LMS	1	0.183
WMS	0.183	1

#### Eigenvalues:

	F1
Eigenvalue	0.365
Variability (	18.267
Cumulative	18.267

Factor analysis:

Maximum change in communality at each iteration:

Iteration	ıximı	ımchange
	2	0.0373
	3	0.0187
4	4	0.0093
:	5	0.0047
(	5	0.0023
,	7	0.0012
5	8	0.0006
(	9	0.0003
10	)	0.0001
1	1	0.0001

Reproduced correlation matrix:

	LMS	WMS
LMS	0.183	0.183
WMS	0.183	0.183

Residual correlation matrix:

	LMS	WMS
LMS	0.817	0.000
WMS	0.000	0.817

	F1
LMS	0.707
WMS	0.707

Factor pattern:

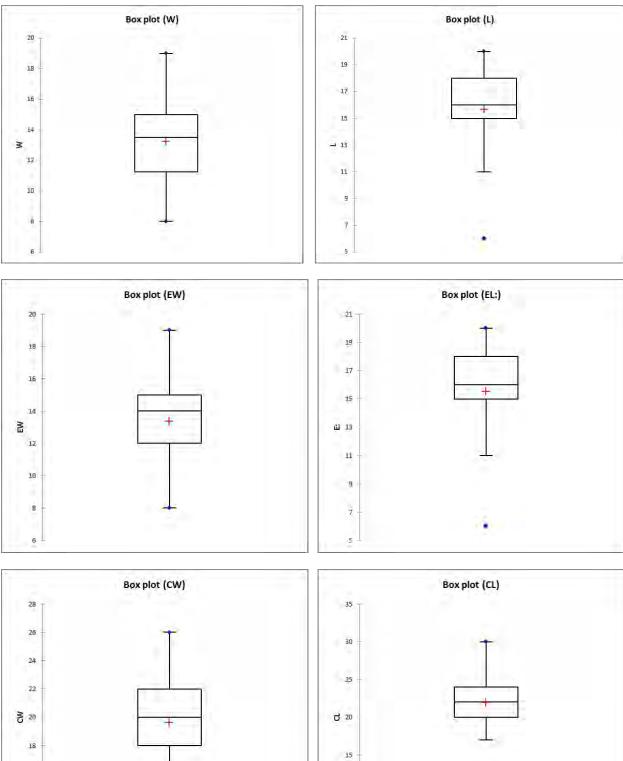
Eigenvectors:

	F1 ia	al communaal	communa ec	ific varian
LMS	0.427	0.033	0.183	0.817
WMS	0.427	0.033	0.183	0.817

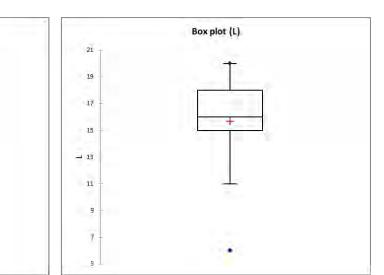
Values in bold correspond for each variable to the factor for which the squared cosine is the largest

Correlations between variables and factors:

	F1
LMS	0.769
WMS	0.769



8 -

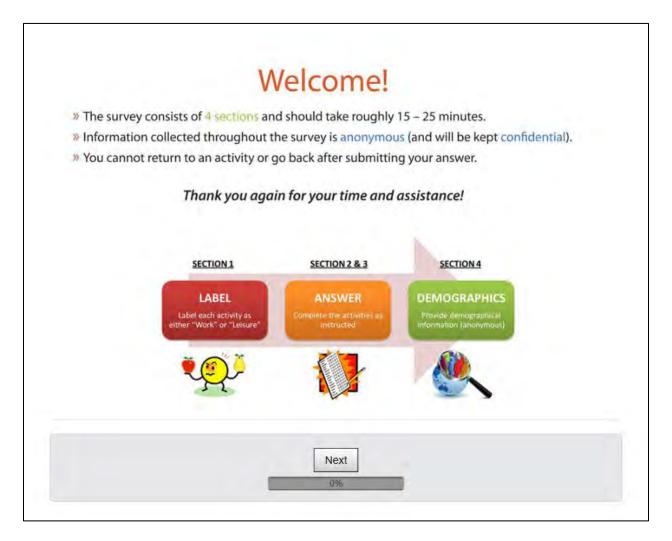


Factor scores:

	Factor	Scores		tion of the tions (%)	•	sines of the vations
Observation	LMS	WMS	LMS	WMS	LMS	WMS
Obs1	-0.351	0.559	0.359	1.319	0.282	0.718
Obs2	1.177	-0.969	4.038	3.958	0.596	0.404
Obs3	2.161	-0.262	13.621	0.289	0.986	0.014
Obs4	-2.332	-2.533	15.860	27.081	0.459	0.541
Obs5	-0.405	1.338	0.478	7.555	0.084	0.916
Obs6	-0.538	-0.462	0.845	0.899	0.576	0.424
Obs7	0.132	1.042	0.051	4.584	0.016	0.984
Obs8	-0.140	-0.619	0.057	1.614	0.049	0.951
Obs9	-1.667	0.909	8.105	3.487	0.771	0.229
Obs10	1.068	0.590	3.329	1.467	0.767	0.233
Obs11	0.374	1.284	0.408	6.956	0.078	0.922
Obs12	-0.780	-0.703	1.773	2.086	0.552	0.448
Obs13	-0.176	-0.099	0.090	0.041	0.759	0.241
Obs14	-1.371	0.372	5.484	0.583	0.932	0.068
Obs15	0.084	-0.117	0.021	0.058	0.339	0.661
Obs16	-1.909	0.667	10.625	1.880	0.891	0.109
Obs17	-0.423	1.598	0.522	10.772	0.066	0.934
Obs18	0.362	-0.395	0.381	0.658	0.456	0.544
Obs19	2.439	-0.540	17.347	1.228	0.953	0.047
Obs20	-0.629	0.837	1.152	2.955	0.361	0.639
Obs21	0.724	-0.033	1.529	0.004	0.998	0.002
Obs22	-0.224	-1.259	0.147	6.685	0.031	0.969
Obs23	-0.279	-0.480	0.226	0.971	0.252	0.748
Obs24	0.845	0.088	2.081	0.033	0.989	0.011
Obs25	0.634	1.266	1.171	6.761	0.200	0.800
Obs26	0.657	-0.932	1.260	3.668	0.332	0.668
Obs27	-1.196	-0.287	4.174	0.347	0.946	0.054
Obs28	1.123	-0.189	3.675	0.152	0.972	0.028
Obs29	0.639	-0.673	1.192	1.910	0.475	0.525

Values in bold correspond for each observation to the factor for which the squared cosine is the largest

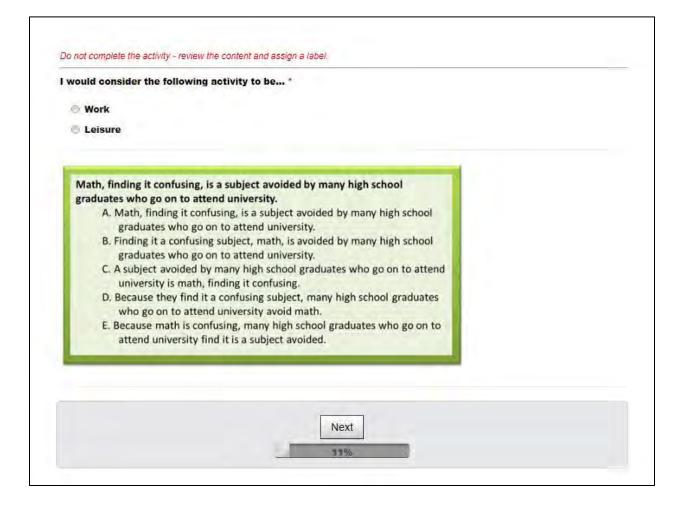
#### Exhibit F: Perceived Task-Type / Motivation Instrument (PTTMI)





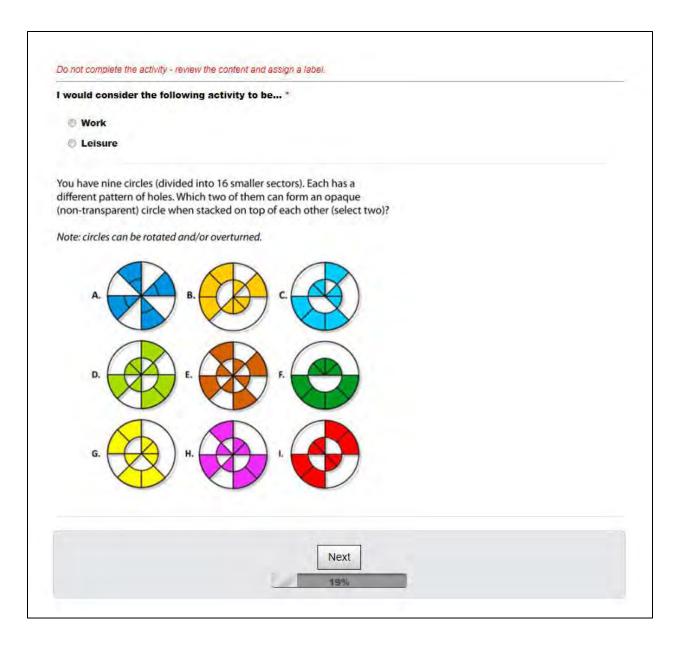
	Nork Leisure
	ne sales price of a copy machine is \$12,590, which is 20% off the riginal price.
w	/hat is the original price?
	A. \$14,310.40
	B. \$14,990.90
	C. \$15,290.70
	D. \$15,737.50
	E. \$16,935.80

would consider the following	g activity to be *	
© Work		
O Leisure		
The following questions pertain to	o the enclosed video clip:	
ne ronowing questions pertain te		
4	*	
- ~		
-		
	10	
Diam	iond	
▶ ◄?) 0:00 / 0:00	+ Yeu 📅 23	
2a) What color is the sq	uare?	
2b) What shape is the b		

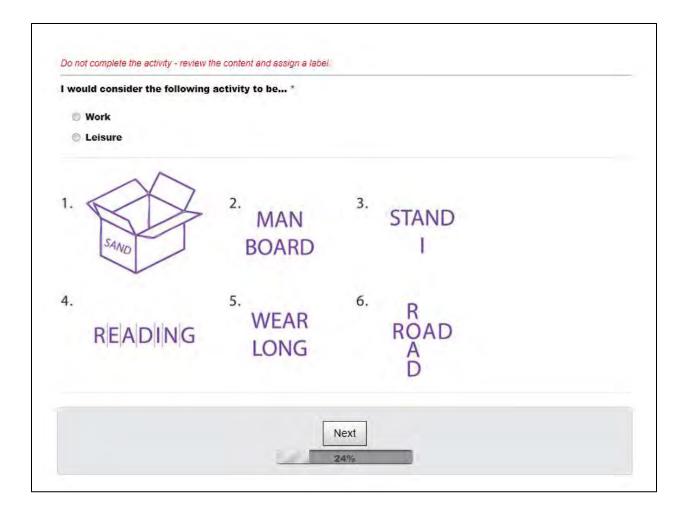


I would consider the fol	lowing activity to be *	
Ø Work		
© Leisure		
	MADISON	
	MONROE	
	JOHN QUINCY ADAMS	
WASHINGTON	ANDREW JACKSON	
ADAMS	VAN BUREN	
IEEEERSON		
<b>()</b> (0:00 / 0:00	+ You 1000 53	
True or False: Madison was		
of the United States of Am () True		

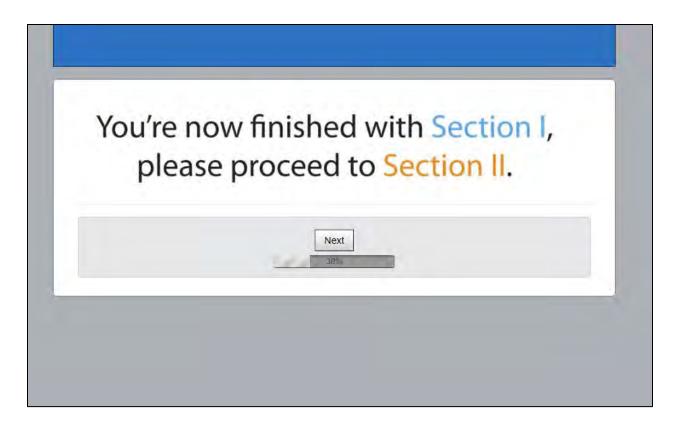
	onsider the following activity to be *
Worl	ĸ
© Leis	ure
People a tions, to people are disfi sustaine physica well. Rh fore, it's to have contrary "Fixing" extreme women and old	uals are choosing to have plastic surgery now more than ever before, and the trend is alarming, are now willing to go under the knife for everything from muscle implants, to breast reduc- onose jobs. But why is this happening with such increasing frequency? Inarguably, some have legitimate reasons for wanting plastic surgery. Birth defects like cleft palates, for example, guring medical conditions that can be remedied through plastic surgery. An individual who ed a broken nose earlier in life may be disfigured by a nose that remains a psychological and I impairment into adulthood. An untreated broken nose can lead to breathing problems, as inoplasty is a merciful solution for those requiring medical care to treat the condition. There- not fair to say that no one should have plastic surgery. However, many individuals who choose cosmetic procedures have no physical impairment or debilitation requiring surgery. On the y, their desire to "fix" themselves is indicative of deeper issues with self-esteem and self-image. the external appearance through plastic surgery will rarely solve these problems. At the e level, people may request plastic surgery so that they can literally change who they are. Asian having folds added to their eyelids so as to appear differently, women getting breast implants, er women having facelifts are troubling trends - trends that should make us all stop and why these unfortunate people feel that simply being themselves isn't good enough.
( ( ( ( ( ( ( ( ( ( ( ( ( (	burth sentence, the word "legitimate" most nearly means ) legal ) true ) valid ) numerous ) irrational <b>stage describes plastic surgery as something</b> ) that is completely unnecessary. ) that is acceptable in some circumstances, but not all. ) that is performed on people with mental health issues. ) that is being performed less now than it once was. ) that is effective at solving self-esteem problems.



ould consider the followin			
Leisure			
DIST.			
1		and the same	
How much did the produ	ct for \$670 which was a 35% profit ov	er his cost.	
A. \$496.30	ce onginany cost mint		
B. \$512.40			
C. \$555.40			
D. \$574.90			
E. \$588.20			



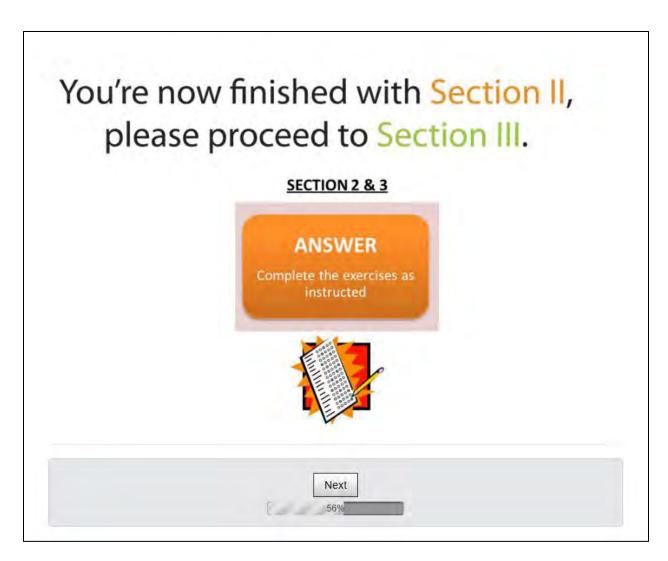
© W	d consider the following activit lork eisure		
	Anagram	Hint	
1.	ULTRA ASIA (9)	Hopping Marsupials	
2.	BIG MULE (7)	Waffles	
3.	COLD ANTS (7)	Plaid	
4.	A SNIP (5)	Does it Rain?	
5.	LIZARDS WENT (11)	Chocolate	
		Next 27%	





(Respondents then completed activities each assigned as work)

1	2	3	4	5				
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Stron Agre				
				1	2	3	4	5
. I enjoyed completi	ng these activities *			Ø	0	0	Ø	0
. I found the activitie	es challenging *			Ø	0	Ø	Q	0
. The activities mad	e me think in differen	t ways *		0	Ø	0	Ø	0
. It was satisfying to	find the answer *			0	Q	Ø	Ø	0
. I enjoyed completi	ng the activities on n	ny own *		Ø	Ø	0	0	0
. I preferred the mor	re difficult activities *			Ø	Ö	Ø	0	Ø
. I believe these act	ivities could be of so	me value to me *		Ø	٢	0	Ø	0
After working at th	ese activities for a wi	hile, I felt pretty competent	*	0	0	0	Ø	0
. While completing t	hese activities, I was	able to persist to the com	pletion of the exercises	0	0	0	0	Ø
0. I felt that I couldn	't do very well on the	se activities *		Ø	0	Ø	0	Ø
1. Doing well on the	se activities was imp	ortant to me *		Ø	0	0	0	0
2. I am curious abo	ut how I did on these	activities relative to others	*	0	Ø	Ø	Ø	0
13. I am not concerned about the score I received on these activities *					Ø	0	0	0



(Respondents then completed activities each assigned as leisure)

1	2	3	4	5				
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Stron Agre	-			
				1	2	3	4	5
1. I enjoyed completin	ng these activities *			0	0	0	Ó	0
2. I found the activitie	s challenging *			Ø	0	0	0	O
3. The activities made	e me think in differer	t ways *		0	0	0	0	O
4. It was satisfying to	find the answer*			0	0	0	0	0
5. I enjoyed completin	ng the activities on n	ny own.*		0	0	0	Ø	0
6. I preferred the mor	e difficult activities *			Ø	Ø	0	O	Ø
7. I believe these acti	vities could be of so	me value to me *		0	0	0	0	©
8. After working at the	ese activities for a w	hile, I felt pretty competent	t*	Ø	Ö	0	Ő	Ø
9. While completing t	hese activities, I was	able to persist to the com	pletion of the exercises	0	0	0	Ø	0
10. I felt that I couldn'	t do very well on the	se activities *		0	O	0	0	O
11. Doing well on the	se activities was imp	ortant to me *		Ô	0	0	0	0
12. I am curious abou	ut how I did on these	activities relative to others	s*	Ö	0	0	0	Ö
13. I am not concerne	ed about the score I	received on these activitie	S *	0	0	0	0	0



Gender: *	
Male	
Ø Female	
Year you were born: *	
Please Select 💌	
Education *	
Please Select	
Household Income (optional)	
- Please Select -	
	e capacity (including current or past jobs)? *
(round to closest number of years)	
Job Title (current or most recent) Please Select	
Job Title (current or most recent) Please Select	
Job Title (current or most recent)  Please Select Industry (current or most recent)  Please Select	
Job Title (current or most recent)  Please Select Industry (current or most recent)	
Job Title (current or most recent)  Please Select  Industry (current or most recent)  Please Select  Where do you currently reside?	
Job Title (current or most recent)  Please Select Industry (current or most recent)  Please Select Where do you currently reside?	

The following items are not related to the activites just completed but instead should be answered in the context of your daily experiences AT WORK.

Answer each item according to the following scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

At WORK, my primary motivation is ...

	1	2	3	4	5
to achieve a sense of accomplishment.	0	Ø	0	Ø	0
to achieve my goals.	Ø	0	0	0	Ó
to receive recognition from others.	0	0	0	0	Ø
to receive my paycheck.	Ø	Ø	0	0	Ø
to receive a job promotion.	0	0	0	0	0
the job itself / the work itself.	0	0	0	0	0
I'm not sure what motivates me at work.	0	Ø	0	O	0

If you have any additional comments or questions, please feel free to write them here (optional).

 *		
ſ	Submit	
L		

