



Are Job Satisfaction and Life Satisfaction Higher When Employees' Jobs Match Their Cognitive Style?

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Are Job Satisfaction and Life Satisfaction Higher When Employees' Jobs Match Their
Cognitive Style?

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A Thesis in the Field of Psychology
for the Degree of Master of Liberal Arts in Extension Studies

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Abstract

Research has shown that field dependent and field independent people respond to their environments differently. Further, there have been several studies that document a lack of employee-job fit as a major reason for why people leave their jobs (Thompson, 1985). Studies have also suggested that employees seek a fit among their cognitive style, job preferences, and organizational characteristics (Armstrong et al., 2011), even if they are unaware that cognitive style is part of what is driving their decisions. Studies on cognitive style, initiated in the early 1950s, have aimed to identify individual differences in cognition that are stable in relation to the environment. Thus, the purpose of the present study is three-fold: (a) to investigate the relations among job/cognitive style match and the major outcome variables (two measures of job satisfaction, life satisfaction, three work environment dimensions); (b) to examine differences between those whose job characteristics and cognitive style match versus do not match on the major outcome variables; and (c) to assess differences between those with field independent versus field dependent cognitive style on the outcome variables. One hundred twenty-five volunteer workers completed surveys on cognitive style, work environment, job satisfaction, and life satisfaction. Results suggested that those with a match between job characteristics and cognitive style exhibit greater job satisfaction and life satisfaction. Findings also revealed that field dependent individuals experience greater job and life satisfaction than those with a field independent cognitive style. Finally, an interaction between cognitive style and job match indicated that those with field independent cognitive styles whose jobs match their style perceive more personal growth and goal orientation in their jobs than all other groups.

Dedication

This thesis is dedicated to my amazing fiancé Timothy Duchesneau, a constant source of unconditional love, support, and encouragement. Thank you for everything.

This thesis is also dedicated to my family. Especially my parents, Mieko and Ned Gandevani, who by great example taught me the power of hard work. I am very grateful to be your daughter.

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Chapter I

Introduction

Employers and employees alike suffer when a new hire does not work out. According to the American Management Association (2001), 42 percent of companies use some sort of psychometric test as part of their hiring process. The most commonly used assessments such as the Neuroticism-Extraversion-Openness Personality Inventory (NEO-PI) uncover prospective workers' personality characteristics but do not specifically predict the fit between employee cognitive style and job preferences (Armstrong & Priola, 2011). However, ongoing theory and research (e.g., Demick, 2014a, 2014b, Wapner & Demick, 1991) have suggested that a better assessment approach for predicting job preference might be to evaluate cognitive style. Kozhevnikov (2007) has described cognitive style as a characteristic manner in which individuals process information about their environment. Studies on cognitive style started in the early 1950s and have aimed to identify individual differences in cognition that are stable in relation to the environment. The cognitive style that has received the most attention—partly because it is the only one that has consistently employed experimental tasks rather than self-report in its assessment—has been that of field dependence-independence (see Demick, 2014a, for a comprehensive review).

Field dependent individuals rely heavily on environmental cues when processing information while field independent individuals depend primarily on their own knowledge to interpret data across a broad array of domains (Armstrong et al., 2011). Witkin and Goodenough (1997) have stated:

Field dependent individuals are more likely to recognize the dominant frames of reference in their social environment to define their attitudes, beliefs and feelings while

those who are field independent develop more impersonal orientations with an interest in the abstract and theoretical. (Alvi & Khan, 1988, p. 452)

Further, early studies in the business context have uncovered that managers' report field independent workers easier to train than field dependent ones because the former are more likely to perceive their environments accurately and appropriately. In contrast, Heesacker et al. (1984), as cited in Hayes and Allinson (1994) have reported that field dependent employees' perceptions of their environments are influenced by the credibility of a source, even if the source presents counter-attitudinal arguments.

Given the general applicability of the cognitive style construct, would it be a better means of screening for employee/employer fit than currently used assessment tools? In particular, is an employee more dissatisfied when there is a mismatch among their cognitive style, preferences, and their job?

Lack of employee-job fit is a major reason why people leave their jobs (Thompson, 1985). Employees seek fit among their cognitive style, job, and organizational characteristics (Armstrong et al., 2011), even if they are unaware that cognitive style is what is driving their decisions. Because both employees and employers cite lack of fit as among the most frequent reasons for leaving a specific job, could employee dissatisfaction be reduced, minimizing the stress of poor fit, and reducing the personal and corporate costs of high employee turnover if assessing goodness of fit were evaluated using measures of cognitive style? Such relations are explored below.

Defining Cognitive Style

Cognitive style can be described as a stable characteristic or characteristics of *how* one functions, rather than how *well* one functions, over a variety of situations (Wapner & Demick, 1991). Witkin et al. (1954) developed one of the first major studies on cognitive style and employed both the Rod-and-Frame Test (RFT) and the Embedded Figures Test (EFT) to examine the differences in individuals' perception of their environment and associated these differences with particular personal preferences. They found that individual differences in how people performed these perceptual tasks were stable over time and across tasks (Kozhevnikov, 2007).

Cognitive styles seem to manifest from biological and social factors (Wapner & Demick, 2014). An example of a biological factor resistant to change includes schizoid personality traits stemming from an early difficult temperament while an example of a sociocultural factor is parental socialization practices. There are many types of constructs that describe an individual's style that are not based on biological traits but are styles that have been preferred based on environmental circumstances such as motivational style, thinking style, or learning style (Wapner & Demick, 1991). By testing employees' cognitive style rather than these other styles, researchers' results will be less subject to behavioral changes from environmental circumstances. Further, cognitive style is a robust variable that predicts a range of outcomes such as tolerance for unrealistic experiences, constriction-flexibility, and locus of control. However, field dependence-independence has continuously been the preferred construct for relating cognitive style to real world outcomes both because it can be tested experimentally, and it has been related holistically to functioning at all levels of organization.

The field dependence-independence cognitive style construct has been studied in a broad range of populations and settings since its introduction in the 1950s. The data have consistently shown that most people fall into one of the two cognitive styles: field dependent people who tend to be influenced both positively (e.g., through the fostering of cooperative, shared learning) and negatively (e.g., through increased distractibility) by the social aspects of their environments; and field independent people who perceive and process information in a more analytical way, separating target items from their surrounding visual field and seeking to process information based on their own knowledge and experience. Further, people high in field independence tend to be task-oriented, value precision and attention to detail, are less attentive to the social aspects of their environments including their work environments, and prefer structured situations (Armstrong et al., 2011). Given these very different approaches, it seems likely that cognitive styles would predict preferences for various organizational environments and jobs.

Witkin and his colleagues developed two tasks to assess an individual's cognitive style. The first is the Group Embedded Figures Test (GEFT), which requires the examinee to locate 18 simple target figures within larger more complex figures. The mean score on this task is 11.4 (out of 18) so that participants who score 11.4 or higher are categorized as field independent and those who score below 11.4 are categorized as field dependent (Witkin et al., 1971). The second task is the Rod-and-Frame Test (RFT), which consists of a movable rod inside a frame; here, the participant must adjust the rod to the true vertical position as the position of the frame is changed. Degree of error (i.e., number of degrees from true vertical) is the measure used to score the test. The higher the score, the more field dependent the participant is because he or she uses the main axes as a basis for judging the upright when bringing the rod into alignment with the titled frame; the lower the score, the more field independent the person is because he or she

adjusts the rod close to the upright by using the body as the main basis for the rod position regardless of the frame position (Witkin, 1979). These two measures combined (often overlooked in current research) have illustrated clear differences between the field dependent and field independent cognitive style. For example, Witkin and associates found subjects who had difficulty separating simple figures from complex figures on the GEFT were also the ones who used the main axes as a basis for judging the upright when bringing the rod into alignment on the RFT and thus were more field dependent in nature (Witkin & Goodenough, 1981).

It is important to note that cognitive style is not a dichotomy. Rather, it is the degree to which an individual gravitates toward and prefers one style to the other. Research has generally shown that an individual's preference remains relatively stable from childhood to adulthood. A longitudinal study conducted by Witkin et al. (1967) examined the development of differentiation in individuals' cognitive style. The researchers observed two groups that consisted of 8- to 24-year old's and asked them to complete a battery of tests to evaluate their cognitive style differentiation as they grew older. They found that subjects who displayed a predominant cognitive style when they were younger exhibited a slight increase for the opposite cognitive style until age 17 years. Subsequently, as the subjects transitioned to young adulthood, the cognitive styles that were displayed when they were younger remained stable across the next 14 years.

Thus, cognitive style assessments—and field dependence-independence cognitive style assessments in particular—might serve as a better tool to screen for employee/employer fit because such assessments have the potential to increase employee job satisfaction, minimize the stress of poor fit, and reduce the cost of turnover for the employer. If employers used cognitive style assessments to test whether their employees have a more field dependent or independent

cognitive style, the findings would help both workers and those who employ them be better prepared when there are mismatches in job or organizational characteristics since, on the most general level, field dependent employees can be considered to care more about organizational characteristics and field independent employees, more about job characteristics. Further, by testing if individuals with a field independent or dependent cognitive style are more dissatisfied when there is a mismatch between their preferences and specific jobs, employers will be more aware of how their employees listen, feel, and act when their cognitive style is not conducive to their organizational environment or their job.

Cognitive Style in the Workplace

Employers and employees benefit when there is a good fit among individuals' cognitive style, specific job characteristics, and/or organizational characteristics. If employers tested prospective employees' cognitive style during the interview process, could it minimize organizational and job characteristic discrepancies while on the job? Of course, some people stay in jobs that are a poor fit. However, by testing an employee's cognitive style, employers are better able to screen for employee/employer fit because employers have a clearer understanding of how well their employees' way of thinking and acting will relate to the duties of their jobs. This may better predict job dissatisfaction when there is a mismatch between their cognitive style, personal preferences, and job or organizational characteristics.

Person-Job Cognitive Style Fit

There are distinct career differences between field independent and field dependent individuals. Field independent individuals tend to gravitate toward analytical-impersonal domains such as mathematics and science and choose careers such as mathematician, physicist,

chemist, biologist, architect, engineer, and accountant while field dependent individuals are more likely to choose careers in domains that involve sociology, humanities, and social services such as nurse, writer, elementary school teacher, and clinical psychologist (Witkin et al., 1977). Further, a deeper analysis can be found on O*Net, a website containing our nation's primary source of occupational information. This site contains hundreds of standardized occupation-specific job descriptions and breaks down each job by types of tasks, skills, knowledge, abilities, and work context. For example, the duties, abilities, and work context for an elementary school teacher include the ability to express ideas and information orally so others will understand, comfort with constant contact with others, the ability to work within a group or team, and the ability to adapt teaching methods and instructional materials to meet students' varying needs and interests (O*Net, 2019). The job characteristics for an elementary school teacher align with an individual who is field dependent because they emphasize the importance of interpersonal skills and involvement with others. Conversely, the duties, abilities, and work context for a civil engineer include the ability to provide technical advice to industrial or managerial personnel regarding design and construction, the ability to use analytical and scientific software, and the ability to identify complex problems and review related information toward developing and evaluating options and implementing solutions (O*Net, 2019). A civil engineer's preferred work context includes the willingness to take on responsibilities and challenges, to work on one's own, and to make decisions. These job characteristics align well with field independent individuals because they highlight the solitary nature of the work, which requires analytical thinking. However, what happens when there is a mismatch between an individual's cognitive style and his or her job?

Job fit is a sub-concept of person-organization fit. Chilton et al. (2005) have described person-job fit as the “compatibility between the individual and the tasks a person is expected to accomplish in exchange for employment, as well as the characteristics of those tasks” (p. 198). It is important to note that person-job fit is measured by the tasks performed and does take into account the organization in which the job is held.

There is currently a lack of research on the relations among cognitive style, job title, and job satisfaction. However, some researchers have reported a positive relationship between a match in job skills and job satisfaction. For example, Allen and Van der Velden (2001) asked 2,460 college graduates to rate their overall job satisfaction on a scale from 1 (very unsatisfied) to 5 (very satisfied). The questions included degree of autonomy, variety of work tasks, opportunity to introduce one's own ideas, and prestige associated with the job. The researchers found job satisfaction to be positively influenced by these collective job characteristics.

Another study (Carless, 2005) examined the relations between perceived person-job fit and intentions to accept a job offer in 193 graduate applicants. The study employed three tasks. The Organizational Attraction scale developed by Smither et al. (1993) assessed applicants' perceptions of the company; the Job Acceptance Intentions test by Harris and Fink (1987) measured the likelihood of one's accepting the job; and the Person-Job Fit Perceptions scale by Saks and Ashforth (1997) measured the match or fit among applicants' knowledge, skills, abilities, and what was required for the job. The findings revealed that applicants who perceive a fit between the job and themselves are more likely to accept a job offer.

Person-Organizational Environment Cognitive Style Fit

Kristof (1996) has defined person-organizational fit as “the compatibility between people and organizations when (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics, or (c) both” (Carless, 2005, p. 412). Researchers have tested the effects of a match or mismatch between students’ cognitive style and their school environments. For example, Renninger and Snyder (1983) have examined eight secondary school classrooms ranging from ninth to twelfth grade that consisted of 192 students and eight teachers. The students had all taken courses with the participating teachers. The researchers assessed both the students’ and teachers’ cognitive styles by administering a Group Embedded Figures Test (GEFT) as well as a Likert Scale to assess satisfaction with the school environment. The researchers found that, when students’ cognitive style matches that of their teachers, students express greater satisfaction with their class than students who have a mismatch with their teacher. They also found that field dependent students are more satisfied than field independent students when their teachers’ cognitive style matches their own. Conversely, examination of the teachers’ satisfaction scores revealed that, relative to field independent teachers, field dependent teachers tend to be more satisfied with their students regardless of their cognitive styles. However, this may be related to the notion that field dependent teachers engage in more interpersonal interaction with their students.

While Renninger and Snyder (1983) found field dependent students to be more satisfied when there was a match with their teacher’s cognitive style, school and organizational environments embody many different characteristics. For example, researchers have noted four important domains that describe an organizational environment. These include physical features,

organizational structure and policies, personal characteristics of the employees, and social climate (Moos, 1987).

James and Jones (1974) have asserted that cognitive style affects employees' views of their organizational environments more strongly than the attributes of the organizations' environments themselves. This may be related to the notion that cognitive style is a stable construct so that what is physically or psychologically important to the employee is how he or she perceives the organizational environment rather than how others might choose to describe it. In line with this, Wooten et al. (1994) provided an empirical demonstration of how employees' perceptions of their organizational environments relate to their cognitive styles. These researchers administered a Group Embedded Figures Test (GEFT) and a Work Environment Scale (WES) to 375 undergraduate students. They found that organizational environment perceptions are significantly associated with cognitive style: in particular, field independent individuals prefer autonomous and innovative organizational environments. However, this work was limited in that students rather than adult workers served as participants. Earlier, Sarmany (1979) found that field independent adult employees are more likely to perceive their organizational environments correctly and/or appropriately while the perceptions of field dependent employees are more socially sensitive and easily influenced. For instance, field dependent employees are easily influenced by the credibility and reputation of their sources of information, even when a source presents information counter-attitudinal to their views (Hayes & Allinson, 1994).

Kirton (1980) hypothesized the importance of matching cognitive style to the employee's organizational environment. He wanted to see if this factor would help determine in which department an employee would prefer to work. This study found when the job goals are within

the department, employees who display more field dependent behaviors are more satisfied. On the other hand, when the goals rely on persuading or influencing people outside the department (e.g., sales), employees displaying more field independent cognitive styles are more satisfied (Armstrong et al., 2011). It is important for jobs to match the employers' and employees' cognitive style because it can lead to greater job satisfaction. Job satisfaction is the pleasurable emotional state from an individual's job that is in line with the achievement of his or her job values, while job dissatisfaction is the unpleasurable emotional state of an individual's job that blocks the attainment of his or her job values (Locke, 1969).

Research has shown when there is a mismatch between an employee's cognitive style, he or she is likely to experience greater sensitivity to physical and psychological organizational environment characteristics. This mismatch could result in higher employee dissatisfaction if the organizational environment is not aligned with their preferences. To illustrate this, Chan (1996) sampled 253 engineers in either a staff engineering function or a research and development function and conducted a study on person-organizational fit and employee dissatisfaction. The staff engineering and the research and development employees displayed both field dependent and independent cognitive styles. The researchers found that, when the employee's cognitive style and organizational environment preferences are not conducive to his or her organization's physical or psychological work environment, higher rates of dissatisfaction obtain. Given the stability of cognitive style, an individual's cognitive style is unlikely to change to accommodate the demands of his or her organizational environment. Further, Chilton et al., (2005), collected data from 123 participants from eight different software development companies and tested their cognitive style and person-organizational fit with Kirton's adaption-innovation inventory scale (KAI). They found that, when there is a mismatch between an individual's cognitive style and

his or her work environment, a positive effect on stress and strain and a negative effect on performance occur. Chilton et al. (2005) defined job strain as “a range of negative psychological and physiological outcomes, including state anxiety, state irritation and depression” (p. 199). Additionally, researchers have also found a lack of person-organizational fit with low levels of motivation, low levels of commitment, high levels of work-related stress and strain and low levels of job satisfaction (Chan, 1996; Chesney & Rosenman, 1980; Downey et al., 1975; Posner, 1992; Tziner, 1987).

Previous research on lack of person organization fit focused on goals, values, ethics, climate, and particular personality characteristics but researchers such as Chan (1996), as cited in Brigham et al. (2007), have illustrated the importance of incorporating an individual's cognitive style when examining person-organization fit. For example, when candidates interview for a role in which they are interested, they might use fit perceptions when choosing an employer (Judge & Cable, 1997; Saks & Ashforth, 1997). Similarly, employers look for organizational fit when interviewing a candidate but do not take into account the candidate's individual differences such as his or her cognitive style (Cable & Judge, 1997; Kristof-Brown, 2000). From the outside looking in, the candidate may agree with the company's goals, values, and culture. However, once the individual is hired, he or she may realize the day-to-day work and his or her manager's working style are unlike his or her way of thinking, learning, and understanding. This lack of person-organization fit causes employees to employ specific coping behaviors to help them handle their frustration and conflict between their preferred preferences of problem solving, communication style, and organizational environment (Brigham et al., 2007). Unfortunately, these coping behaviors can cause great stress and cannot be sustained for long. Kirton (1976) found individuals always seem to return to their preferred decision, learning, and communication

style. This level of stress often in turn causes individuals to change their circumstances such as their job to suit their preferred dominant cognitive style.

The match between individual job characteristics and/or the organizational characteristics has proven to be a beneficial concept for an employee's job satisfaction, organizational commitment, and turnover (O'Reilly et al., 1991; Vandenberghe, 1999). Goodman and Svyanktek (1999) found that, when employees' cognitive style is aligned with their work environment, employees are more likely to display higher organizational citizenship behaviors. Organizational citizenship behavior occurs when employees contribute positively to their organizations beyond their defined work role (Chan, 1996). It is important for employers to assess an individual's actual versus perceived fit. This is because by assessing actual fit, employers are able to use objective versus subjective measures and are better able to predict undesirable consequences such as increased turnover and reduced commitment down the line (O'Reilly & Chatman, 1986; Vandenberghe, 1999).

Cognitive Style and Job Satisfaction

It is evident that an employee's cognitive style accentuates psychological characteristics such as job satisfaction and dissatisfaction when there is a mismatch with his or her preferred organizational environment. Job satisfaction can be defined in many ways. Chi and Gursoy (2009), as cited in Mafini (2014), have suggested that job satisfaction is the “extent to which employees like their work” (p. 454), whereas Koys (2003), as cited in Mafini (2014), has defined job satisfaction as “the employees’ perception and evaluation of the job” (p.454). Bernhardt et al. (2000), as cited in Mafini (2014), has also defined job satisfaction as “a personal evaluation of the present conditions of the job as well as outcomes that arise as a result of having a job” (p.454). All of these definitions relate to the importance of the person job and environment fit

paradigm, which states that job satisfaction is higher when the job environment and job characteristics are conducive to employees' needs, values, and personal characteristics (Judge et al. 2001).

O'Reilly et al. (1991) conducted a study that tested five different groups of subjects on their person-organizational fit. One of the groups participated in a longitudinal study that consisted of 171 accountants that were within their first two years of employment across eight different firms. They completed a scale, which contained 54 generic statements that assessed workers' views on their organizational characteristics. The researchers developed a profile of the culture of each firm and calculated the individual's person-organizational fit. They found that individuals' organizational fit predicted how satisfied workers were with each of their jobs. After the study concluded, eight accounting firms were able to provide the researchers with a list of individuals who were dissatisfied and left their jobs. Out of the 171 accountants, about 28% were dissatisfied and left their firm within the next two years. This result was consistent with the participants who expressed a lack of person-organization fit at their firm. This study also found that accountants who express a perfect organizational fit are more satisfied and stay approximately twice as long (O'Reilly et al., 1991).

The characteristics of a field independent and dependent cognitive style provide employers further insight into how employees' organizational environment affects their overall job satisfaction. Locke (1969) found the employees' perception of what their job offers and what they want from a job dictates whether they will be satisfied or dissatisfied with their job. A study assessed whether field dependent and independent employees differed in their ability to differentiate between intrinsic and extrinsic sources of job satisfaction. Ninety-six civil service supervisors were administered the GEFT and a Job Satisfaction Questionnaire (Gruenfeld &

Weissenberg, 1970). The researchers found that job satisfaction and dissatisfaction are highly correlated with both intrinsic (36%) and extrinsic (49%) factors for field dependent employees, while intrinsic and extrinsic factors are viewed independently by field independent employees. However, intrinsic factors such as job characteristics are higher for field independent employees, while field dependent employees express higher extrinsic factors such as organizational characteristics. The characteristics of individuals with a field dependent cognitive style may explain why they may be more dissatisfied when there is a mismatch between their organizational characteristic preferences.

Further, as companies shift towards more group work, it is important for employers to access employees' cognitive style. This is because when individuals participate in groups whose members differ with their own cognitive style, they may find themselves more likely to disagree with each other's problem-solving approaches, communication styles, and behaviors (Tierney, 1997). In particular, Kirton and McCarthy (1985) found a greater lack of appreciation, understanding, and degree of work pressure when employee's with different cognitive styles work together (Tierney, 1997). Thomson (1980), as cited in Tierney (1997), also found that team members with different cognitive styles are more likely to report intentions to leave the organization. Additionally, Goodenough (1985), as cited in Tierney (1997), found that employees are likely to experience greater job satisfaction when their team members have similar cognitive styles as themselves.

An employee's immediate working group including their manager(s) and team member(s) are crucial when assessing person-organization fit. Kirton and McCarthy (1988) administered the Kirton Adaption-Innovation Inventory, which measures a form of cognitive style, to a sample of managers and asked them to rate themselves as well as a colleague with

whom they work frequently. The results found that managers who differ in cognitive style by one or more standard deviation from their colleagues report more pressure at work than managers who have a closer cognitive fit. This research has demonstrated the importance of assessing employee cognitive style and the many negative implications the organization can endure when an employee's cognitive style does not align with his or her work environment.

Job and Life Satisfaction

If an employee is satisfied at work, will he or she be more satisfied with life as well? Pavot and Diener (1993), as cited in Shin and Johnson (1978), have described life satisfaction as a judgmental process where individuals assess the quality and satisfaction of their lives based on their own set of criteria. If the individuals' expectations and conditions match their standards, they are said to report high levels of life satisfaction. According to the most recent data from the Bureau of Labor Statistics (2018), Americans on average work about 43 hours per week. At times, individuals may see their co-workers more than their own family members and friends. Bradburn (1969) and Brief and Van Sell (1981), as cited in Wiener et al. (1992), have defined life satisfaction as an individual's sense of psychological wellbeing and positivity toward life. In line with this, Tait et al. (1989) have reported a moderate ($r = .44$) correlation between job and life satisfaction relationship. Judge and Watanabe (1984) have found a spillover effect with job and life satisfaction. A spillover effect occurs when a positive or negative feeling in an individual's life affects another facet of his or her life, which suggests that both job and life satisfaction feelings are interchangeable (Wiener et al., 1992). However, Iverson and Maguire (2000) have demonstrated that job and life satisfaction are in fact not interchangeable. Their study found that job satisfaction affects life satisfaction, but that life satisfaction is not correlated with job satisfaction. Adam et al. (1996) and Judge et al. (1998), as cited in Iverson and Maguire

(2000), also found job satisfaction to have a greater influence on life satisfaction than vice versa because individuals place more value on work in general.

There are many personal variables such as values and expectations that employees bring to their organization. Farrell and Rusbult (1981), as cited by Iverson and Macguire (2000), found these personal variables to influence employees' view of their job and are responsible in predicting job satisfaction. In addition, Steers and Mowday (1981), as cited by Iverson and Macguire (2000), found that, when employee perceptions and job expectations are not aligned with the job, both job satisfaction and life satisfaction decrease.

Rice et al. (1980) have dissected 16 studies on the positive relations between job and life satisfaction. Further, Demirel (2014) examined the relations between job and life satisfaction in teachers. The study included 406 pre-school teachers from public and private schools, who were asked to complete a demographic questionnaire, the Minnesota Job Satisfaction Questionnaire, and the Life Satisfaction Scale. On average, the teachers scored highly on both standardized scales and exhibited a strong correlation between job and life satisfaction. Further, researchers have identified several key factors to life satisfaction. These have included family, health, community, work, and recreational activities (Wiener et al., 1992). However, each domain of life satisfaction varies between each individual.

There is currently a limited number of studies on the relations between cognitive style and life satisfaction. However, Bavolar (2017) has investigated the role of perceived stress as a mediator between an individual's cognitive style and life satisfaction. In particular, he examined whether cognitive styles affect how individuals perceive potentially stressful situations, with their perceptions reflecting how satisfied they are with their lives. He sampled 259 university students aged 18 to 29 years who studied psychology and informatics. Each student was asked to

complete a cognitive style questionnaire, a perceived stress scale, and a general life satisfaction scale. The results showed that no particular cognitive style is more advantageous for dealing with stressful situations and that individuals' cognitive style and life satisfaction are indeed associated with their perceived stress. For instance, when an individual receives information not conducive to his or her cognitive style, he or she becomes frustrated and stressed, which leads to lower life satisfaction (Bavolar, 2017).

Investigators have studied the construct of cognitive style and the importance of person-organization fit. For instance, there have been several studies that found lack of employee-job fit a major reason why people leave their jobs (Thompson, 1985). The previous analysis has thereby suggested that employees seek a fit among their cognitive style, job characteristics, and organizational characteristics (Armstrong et al., 2011), even if they are unaware that cognitive style is what is driving their decisions. If employers assessed prospective employees' cognitive style during the interview process, might this minimize organizational and job characteristic discrepancies for employees while on the job? Further, might a lack of fit affect an employee's life satisfaction? Multiple studies have indeed found job satisfaction to have a greater influence on life satisfaction than vice versa because individuals place more value on work in general (Iverson & Maguire, 2000).

Thus, against the backdrop of this literature review, the present investigation assesses the major hypothesis that there are differential aspects of experience related to whether individuals exhibit a match versus mismatch between their cognitive style and their job characteristics and that this experience is moderated by (field dependent vs. field independent) cognitive style. For example, while it is predicted that those with cognitive styles and jobs that match will exhibit greater job and life satisfaction than those whose cognitive styles and jobs do not match, it is

expected that field independent participants with matching jobs and styles (FI-matched) will be more satisfied than their FI-unmatched, FD-matched, and FD-unmatched counterparts. That such differences should occur gains support from empirical findings that students whose cognitive styles match those of their teachers express greater satisfaction in any given class than students whose cognitive styles are mismatched with those of their teachers (Renninger & Snyder, 1983); and that field independent individuals, generally analytic in nature, place more emphasis on job characteristics than on organizational characteristics while the obverse holds true for field dependent individuals (Gruenfeld & Weissenberg, 1970).

In addition to the major hypothesis, the investigation also assesses two secondary hypotheses: (a) that there are overall differences in affective dimensions (job satisfaction, life satisfaction, positive perceptions of aspects of work environments) in those whose cognitive styles and job characteristics match versus in those whose cognitive styles and job characteristics do not match (cf. Aron et al., 1995, and Berscheid & Walster, 1974, on the similarity-liking association in social psychology); and (b) that there are overall differences between field dependent and field independent persons on most aspects of functioning that cut across all levels of organization, namely, biological, psychological, and sociocultural (Demick, 2014; Wapner & Demick, 1991; Witkin et al., 1954). These and other relations are assessed in the following investigation.

Chapter II

Method

Participants were recruited through Facebook, LinkedIn, and an industrial-organizational psychology class offered through the continuing education division of Harvard University.

Participants

Two hundred eighteen working adults between the ages of 18-64 years were recruited from local companies. Eligibility requirements were simply that all participants be over 18 years of age (to provide informed consent) and have a job. Of the 218 participants, 93 were eliminated as they did not complete all the tests. Thus, the final sample consisted of 125 working adults. Studies in the field have used similar sample sizes. For example, Gruenfeld and Weissenberg (1970) sampled 96 participants while Chilton et al. (2005) employed 123 participants.

The gender composition of the final sample consisted of 31% male and 69% female. The ethnic composition of the final sample included: Whites (60%), Black or African American (3%), Asian Americans (13%), Latino or Hispanic (10%), and Biracial (14%). Because of the small number of ethnic minorities, preliminary analyses employed Whites (60%) versus non-Whites (40%). Given the wide discrepancy of ages included, preliminary analyses employed younger (those between the ages of 18-34 years, $n = 79$) versus older (those between 35-64 years, $n = 46$) workers.

All three recruitment platforms were chosen because they provided direct, inexpensive access to diverse samples of working adults that allowed them to participate anonymously. Facebook and LinkedIn in particular provided a higher likelihood of snowball sampling because participants might have re-shared the post with friends and family members. Many researchers

(e.g., Akard et al., 2015; Dusek et al. 2015; Morgan et al., 2013) have recruited participants from social media sites such as Facebook and LinkedIn and reported it effective in recruiting specific samples (Gelinas et al., 2017).

Tasks and Measures

The test battery administered to participants consisted of seven parts. First, participants were asked to provide demographic information (sex, age, ethnicity, education, marital status, current job title, length of time in current job title, length of time at current organization). For subsequent analyses using job title, the present investigator rated each job title as reflecting either a field dependent or a field independent orientation. Then an independent judge rated 20% of the job titles and the inter-rater reliability for these judgments was 100%. Thus, the present investigator's ratings were used in all relevant analyses.

Group Embedded Figures Test (GEFT)

Participants completed Witkin et al.'s (1977) Group Embedded Figures Test (GEFT). This newly computerized version (cf. Demick, 2014) was designed to be identical to the original paper-and-pencil version. On this new version, participants were asked, to trace (by clicking and dragging their cursor), a previously identified simple figure within a complex figure. The task consists of three sections (section one contains 8 practice questions; sections 2 and 3 each contain 9 questions). Participants receive a score of 0-18, which serves as the major measure (see below). Witkin et al. (1977) considered those who receive a score of 11.4 or higher as field independent and those below 11.4, field dependent. Since its introduction into the literature decades ago (Witkin, 1950), numerous researchers have attested to the task's high reliability and validity. Kepner and Neimark (1984) as cited in Demick (2014) have reported GEFT test-retest reliability coefficients, over three different intervals, as between .78 and .92. There are also

several ways of assessing the validity of the GEFT. Since the test is intended as a group form of the Embedded Figures Test (EFT), the most direct criterion measure is the “parent” form of the test, namely, the Embedded Figures Test (Demick, 2014). One task for evaluating GEFT validity is the RFT, which is itself a criterion measure of field dependence-independence. Therefore, a group of subjects taking the GEFT was subsequently tested on the Rod-and-Frame Test (RFT), administered with the portable apparatus (PRFT). Each subject’s score on the latter test was the absolute number of the errors summed over eight trials. The validity scores between the GEFT and RFT ranged between .55 to .71 (Witkin et.al, 1971).

Frame and Line Test (FLT)

Third, participants completed Bagust’s (2012) Frame and Line Test, which is a computerized variation of Witkin et al.’s (1977) Rod-and-Frame Test (RFT) and Goodenough’s (1976) Portable Rod-and-Frame Test (PRFT). This task generally assesses individual field independence and field dependence perceptual style by measuring the degree to which individuals rely on the visual frame of reference to perceive the true vertical (Bagust, 2012). In the version employed here, the participant is asked to pay attention to a square box within which he or she sees a vertical line. Subsequently, the task shows the participant another square box of the same or different size and asks him or her to reproduce the line that he or she saw in the frame before. After 10 trials, the participant receives a score based on his or her degrees of error (i.e., the mean number of degrees away from 90° across all trials). The higher the score, the more field dependent the participant is and the obverse for field independent participants. Kato (1965) and Morris (1967), as cited in Irving and Henderson (1971), reported RFT correlations to be .74 and .77. The validity correlations ranged between .37 and .41 (Lievens et al., 2008).

Differentiation Index. Following Witkin et al. (1954) and more recently Wapner and Demick (1991), the present research employed both the LFT and the GEFT to determine field dependence-independence cognitive style. This was done because these researchers have argued that this particular cognitive style is comprised of two not completely distinct components, namely, perception of verticality and cognitive disembedding ability, respectively. Toward doing so, a differentiation index was created in the following manner. So that higher scores would represent more field dependence (as on the LFT), GEFT scores were reversed scored (i.e., number incorrect). The two distributions were then standardized and summed. Following a median split, those above the median were designated as field dependent while those at or below the median, field independent.

Work Environment Scale, Form R (WES-R)

Fourth, each participant completed Insel and Moos' (1974) Work Environment Scale, Real Form (WES, Form R), which asks about perceptions of the work environment. The WES-R, which was also administered online, consists of 90 true or false statements that the participant is asked to answer with respect to his or her real, current work environment. The scale is comprised of 10 subscales for the assessment of all types of organizational environments. The subscales include: involvement; coworker cohesion; supervisor support; autonomy; task orientation; work pressure; clarity; managerial control; innovation; and physical comfort. The ten subscales are further divided into three separate dimensions, namely, relationship dimensions, personal growth dimensions, and system change dimensions (Moos & Insel, 1974). All three dimensions were considered in the present study and were characterized as a field independent or field dependent dimension based on what each dimension assessed.

Relationship Dimensions. This dimension consisted of three subscales. Involvement (I) measures the extent to which employees are concerned about and committed to their jobs, for example, how challenging their work is, the pride they have in the organization, and the effort they put into what they do. Peer Cohesion (PC) taps the extent to which employees are friendly and supportive of one another, for example, the effort people make to help a new employee feel comfortable, the interest they have in each other, and how frank they are about their feelings. Supervisor Support (SS) assesses the extent to which management is supportive of employees and encourages them to be supportive of one another, for example, how often supervisors compliment employees who do something well, how often they give full credit to the ideas that employees contribute, and whether employees feel free to ask for a raise.

Personal Growth Dimensions. The three subscales for this dimension are as follow. Autonomy (A) measures the extent to which employees are encouraged to be self-sufficient and to make their own decisions, for example, how much freedom employees have to do as they like, how much they are encouraged to make their own decisions, and whether workers can use their own initiative to do things. Task Orientation (TO) measures the degree of emphasis on good planning, efficiency, and getting the job done, for example, how much attention employees pay to getting work done, how often things get “put off until tomorrow,” and how efficient and task-orientated the workplace is. Work Pressure (WP) assesses the degree to which the pressure of work and time urgency dominate the job milieu, for example, how much time pressure there is to keep working, how often there seems to be an urgency about everything, and whether employees can afford to relax.

System Change Dimensions. The four subscales within this dimension include the following. Clarity (C) taps the extent to which employees know what to expect in their daily

routine and how explicitly rules and policies are communicated, for example, how well activities are planned, how clearly the responsibilities of supervisors are defined, and how well the details of assigned jobs are explained to employees. Control (Ctl) measures the extent to which management uses rules and pressures to keep employees under control, for example, how much following policies and regulations is emphasized, whether employees are expected to follow set rules when doing their work, and how closely supervisors watch employees. Innovation (Inn) measures the degree of emphasis on variety, changes, and new approaches, for example, whether doing things in a different way is valued, whether new and different ideas are tried out, and whether the work setting is one of the first to try out a new idea. Finally, Physical Comfort (Com) assesses the extent to which the physical surroundings contribute to a pleasant work environment, for example, how good the lighting is, how stylish and modern the physical environment appears, and whether the colors and decorations contribute to making the place a warm and cheerful one in which to work.

Form R of the WES was scored by the procedure discussed in Moos and Insel's (1974) manual. Each question is placed under the appropriate dimension for a final sub-score to be calculated. Each final sub-score varies from 0 to 9 and falls between "considerably below average" and "considerably above average" depending on the subscale within each dimension. Overall, the higher the score, the more participants believe that the specific sub-scale characterizes their organizational environment.

Minnesota Satisfaction Questionnaire (MSQ)

Fifth, participants completed Weiss et al.'s (1967) Minnesota Satisfaction Questionnaire (MSQ), which on the most general level assesses employees' satisfaction with their jobs. Specifically, it provides very specific information on aspects of jobs that employees find most

rewarding. Given that the MSQ was administered within a battery of tests, the MSQ Short Form was employed in consideration of participants' time. This questionnaire, administered online, consists of 20 items from the MSQ Long Form (ability utilization, achievement, activity, advancement, authority, company policies, compensation, co-workers, creativity, independence, moral values, recognition, responsibility security, social status, social service, supervision-human relations, supervision-technical, variety, and working conditions). Specifically, participants are asked to rate, from a scale of 1 = *not satisfied* to 7 = *extremely satisfied*, such items as: "The chance to do different things from time to time" or "The chances for advancement on this job" (Weiss et al., 1967). Both the Long and Short Forms generate two scores, namely, "intrinsic work satisfaction" and "extrinsic work satisfaction." The Short Form employed here also generates a general satisfaction score for each participant so that three measures were culled for the present investigation. Internal reliability is .90 and validity for the MSQ is between .38 and .62 (Lievens et al., 2008; Van Saane et al., 2003).

Satisfaction with Life Scale

Sixth, participants completed Diener's Satisfaction with Life Scale. This scale assesses individuals' satisfaction with their lives as a whole. Unlike other instruments, the scale does not assess satisfaction with specific life domains such as health or finances, but it allows participants to weigh and integrate their various life domains in whatever manner they choose. This task, consisting of 5 items, employed a 7-point Likert-type scale format (1 = *strongly disagree*, 7 = *strongly agree*) for each, allowing participants to rate the degree to which they agree with such statements as: "The conditions of my life are excellent." No reverse scoring was needed for this scale. The mean of the items was employed as the major measure from this task. There has been considerable evidence showing the Satisfaction with Life Scale to be both reliable and valid.

related to a high convergence of self- and peer-reported measures of life satisfaction and subjective wellbeing (Diener et al., 1985; Pavot et al., 1991).

Satisfaction with Work Scale

Seventh, participants completed the Satisfaction with Work Scale (Gandevani, 2019), which, based on the Satisfaction with Life Scale, was revised to reflect questions related to work satisfaction. This task also employed a 7-point Likert-type scale format (1 = *strongly disagree* to 7 = *strongly agree*), allowing participants to rate the degree to which they agree with such items as: “The conditions of my job are excellent.” Is there reverse scoring? What is the major measure: one overall mean score?

Procedure

Advertisements describing the study and encouraging potential participants to enroll and to share the study with their friends and family members were posted on Facebook and LinkedIn. At the same time, a similar electronic announcement was sent to the Canvas website of students enrolled in an industrial-organizational psychology class within the division of continuing education at Harvard University. A link to Qualtrics was visible to anyone who saw the Facebook, LinkedIn, or Canvas posts. Before participants were able to complete the study tasks, they were asked to sign informed consent digitally within the Qualtrics link. Once the participants had done so, they were asked to create a unique 5-character code in order to match their responses across the tasks and websites.

After completing the written surveys, participants were then asked to click on an external link to complete the Group Embedded Figures Test and the Line and Frame Test. They were asked to enter their unique 5-character code so that their responses to the external tasks aligned with their answers to the Qualtrics survey, still preserving their anonymity.

The data collected via Qualtrics and the two-external links (Mind Garden and Lab in the Wild) were exported into a Microsoft Excel file. The data from Microsoft Excel was then imported into the statistical software SPSS 16.1 to conduct the comprehensive statistical analysis presented below.

Chapter III

Results

Preliminary correlational analyses between the seven demographic characteristics showed no significant correlations with the outcome variables besides one exception., there was a significant correlation between sex and only one of the six outcome variables. Specifically, sex was correlated with the System Maintenance and System Change dimension of the WES for females only, $r(84) = .20, p < .05$. Therefore, these demographic characteristics were not considered in further analyses.

Demographic characteristics of the 125 participants are shown in Table 1.

Correlational Analysis

The first part of the analysis examined the relations among cognitive style, job/style match, job satisfaction, life satisfaction, and the three work environment dimension scores. The job and life satisfaction scores of individuals with a match between their job and style exhibited significant positive correlations Minnesota Satisfaction Questionnaire, $r(123) = .20, p < .05$, Gandevani's Work Satisfaction Scale, $r(123) = .29, p < .01$, and Life Satisfaction Scale, $r(123) = .30, p < .01$. Only the Gandevani's Work Satisfaction and the Life Satisfaction scores exhibited significant positive correlations with the cognitive style scores, Gandevani's Work Satisfaction Scale, $r(123) = .27, p < .01$; Life Satisfaction Scale, $r(123) = .25, p < .01$. Further correlation analysis (Table 3) indicated significant correlations between Gandevani's Work Satisfaction Scale and the Minnesota Satisfaction Questionnaire, $r(123) = .42, p < .01$, Life Satisfaction Scale and Gandevani's Work Satisfaction Scale, $r(123) = .87, p < .01$, and the Minnesota Satisfaction Questionnaire and the Life Satisfaction Scale, $r(123) = .34, p < .01$.

Table 1

Demographics

Characteristic	Field Independent	Field Dependent	N	%
Sex				
Female	54	32	86	69
Male	19	20	39	31
Age (years)				
18-34	49	30	79	63
35-64	23	23	46	37
Ethnicity				
White	47	28	75	60
Minority	26	24	50	40
Highest Level of Educational Attainment				
M.A./J.D./M.B.A or Higher	43	0	43	34
Bachelor's Degree or Lower	30	52	82	66
Marital Status				
Single	38	33	71	57
Married	30	17	47	38
Separated	0	0	0	0
Divorced	5	2	7	6
Widowed	0	0	0	0
Length of Time at Current Job Title (years)				
Less than 1 year	24	26	50	40
1-3 years	21	15	36	29
3-5 years	4	5	9	7
5-10 years	8	6	14	11
10 years or more	16	0	16	13
Length of Time at Current Organization (years)				
Less than 1 year	20	21	41	33
1-3 years	20	19	38	30
3-5 years	10	8	18	14
5-10 years	14	4	18	14
10 years or more	9	0	9	7

Note. Demographic Characteristics of Participants ($N = 125$)

Table 2

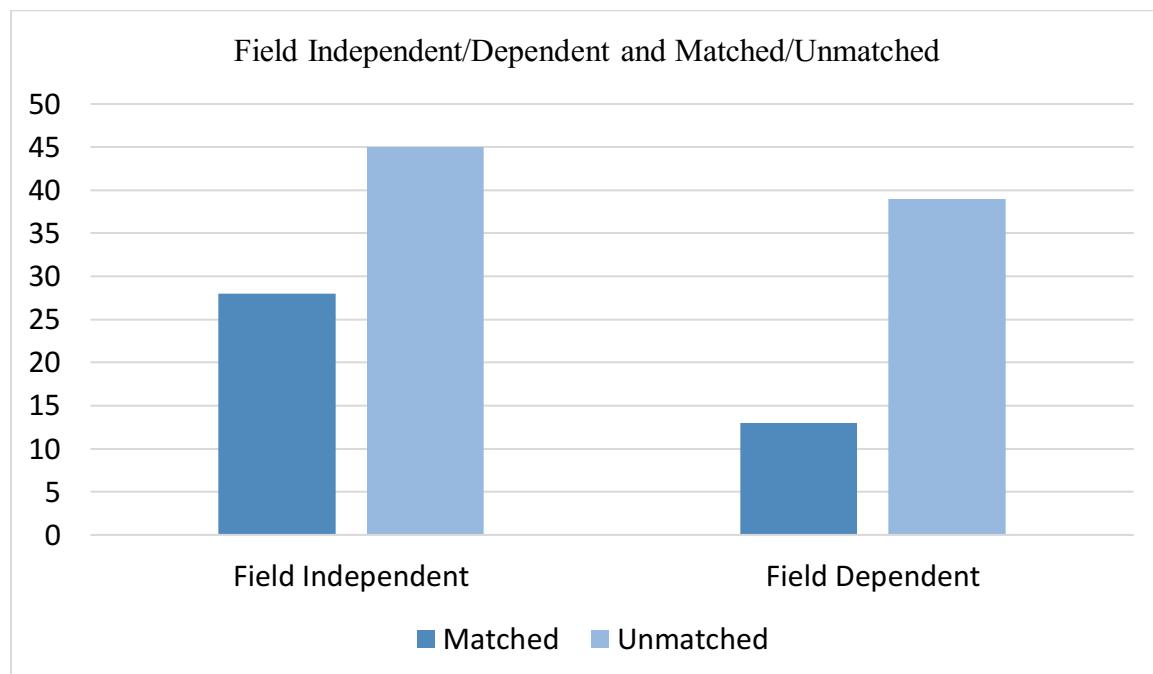
Cognitive Style and Job/Style

Cognitive Style	N	%	Job/Style	N	%
Field Independent	69	55.2	Matched	84	67.2
Field Dependent	56	44.8	Unmatched	41	32.8
Total	125	100	Total	125	100

Note. Number of individuals who were field independent and field dependent as well as how many individuals' style and job matched and unmatched in this study.

Figure 1

Field Independent/Dependent and Matched/Unmatched



Note. Number of field independent and field dependent individuals whose jobs matched or did not match his or her cognitive style.

Table 3

Correlation of Job Satisfaction, Life Satisfaction, Work Environment Dimensions, Cognitive Style, Job/Style Match and Demographic Variables (Sex, Age, Race/Ethnicity)

Scores	1	2	3	4	5	6	7	8	9	10	11
1. Job Satisfaction (MSQ)	-	.42**	.34**	-.09	.01	.02	.03				
2. Job Satisfaction (Gandevani)		-	.87**	.09	.01	.01					
3. Life Satisfaction			-	.93	-.02	.034					
4. Relationship				-	.54**	.62**					
5. Personal Growth or Goal Orientation					-	.49**					
6. System Maintenance and System Change						-					
7. Cognitive Style	.03	.27**	.25**	-.08	.09	-.07	-	-.09			
8. Style/Job Match	.20*	.29**	.30**	.08	.003	.03	-.09	-			
9. Age	-.05	-.06	-.02	.07	-.04	.02	.14	-.05	-.14	-.11	
10. Sex	.14	.09	.60	.93	.60	.20*	.15	.11	-	.04	
11. Race/Ethnicity	.03	-.05	-.11	-.01	.02	-.13	.11	-.09			

Note. * $p < .05$, ** $p < .01$

Hypothesis Testing

Prior to conducting the MANOVA, a series of Pearson correlations were performed between all of the dependent variables in order to test the MANOVA assumption that the dependent variables would be correlated with each other in the moderate range (i.e., .20 - .60; Meyers et al., 2006). As can be seen in Table 3, a meaningful pattern of correlations was observed amongst most of the dependent variables, suggesting the appropriateness of a (MANOVA; Meyers et al., 2006).

A two-way MANOVA with two between-subjects variables—cognitive style and job/style match—was conducted on the six outcome variables—job satisfaction (Minnesota Satisfaction Questionnaire, Gandevani's Satisfaction Scale), life satisfaction, Work Environment

Scale (Relationship, Personal Growth or Goal Orientation, System Maintenance and System Change dimensions). There was a linear relationship among the six outcome variables, as assessed by scatterplot, and no evidence of multicollinearity, as assessed by Pearson correlation, $|r| < 0.9$. There were no univariate outliers in the data, as assessed by inspection of a boxplot, and no multivariate outliers in the data, as assessed by Mahalanobis distance ($p > .001$). Minnesota Satisfaction Questionnaire, Gandevani's Job Satisfaction Scale, Life Satisfaction Scale, Relationship, Personal Growth or Goal Orientation and System Maintenance and System Change dimension scores were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$). There was homogeneity of covariance matrices, as assessed by Box's M test ($p < .01$), and homogeneity of variances, as assessed by Levene's Test of Homogeneity of Variance ($p > .05$).

With respect to the first hypothesis, the interaction effect between cognitive style and job/style match on the combined outcome variables was not statistically significant, $F(5, 116) = 1.67$, n.s., Wilks' $\Lambda = .92$, partial $\eta^2 = .08$. When the results for the outcome variables were considered separately, the only difference to reach statistical significance was on the Personal Growth or Goal Orientation dimension of the Work Environment scale, $F(1, 121) = 5.87$, $p < .01$, partial $\eta^2 = .05$. In contrast, differences on the Minnesota Satisfaction score, $F(1, 121) = .012$, n.s., partial $\eta^2 = .000$, Gandevani's Work Satisfaction score, $F(1, 121) = .203$, n.s., partial $\eta^2 = .002$, Life Satisfaction score, $F(1, 121) = .320$, n.s., partial $\eta^2 = .003$, Relationship dimension score, $F(1, 121) = .198$, n.s., partial $\eta^2 = .002$, and System Maintenance and System Change dimension score, $F(1, 121) = 1.06$, n.s., partial $\eta^2 = .009$ were not significant.

Tukey pairwise comparisons indicated that the mean for the Personal Growth or Goal Orientation dimension of the WES for the field independent matched group was significantly higher ($M = 6.8$, $SE = .23$) than for all other groups. In turn, the field dependent matched group

scored significantly higher ($M = 6.6$, $SE = .38$) than the field independent unmatched ($M = 6.0$, $SE = .29$) and the field dependent unmatched ($M = 5.9$, $SE = .23$) groups.

With respect to the second hypothesis, there was a statistically significant difference between matched and unmatched participants on the combined outcome variables, $F(6,116) = 2.20$, $p < .05$, Wilks' $\Lambda = .90$, partial $\eta^2 = .10$. When the results for the outcome variables were considered separately, three of six differences reached statistical significance. There was a significant main effect for job/style on the Minnesota Satisfaction Questionnaire, Gandevani's Work Satisfaction Scale, and the Life Satisfaction Scale. The means are presented in Table 5, which show that those with a style/job match scored higher than those with a style/job unmatched. There were no statistically significant main effects on the WES including the Relationship dimension, $F(6,116) = 2.01$, $n.s.$, Wilks' $\Lambda = .91$, partial $\eta^2 = .09$, Personal Growth or Goal Orientation dimension, $F(1,121) = .095$, $n.s.$, partial $\eta^2 = .001$, and System Maintenance and System Chang dimension, $F(1, 121) = 1.10$, $n.s.$, partial $\eta^2 = .01$.

With respect to the third hypothesis, there was also no statistically significant difference between field independent and field dependent persons on the outcome variables. However, when the results for the outcome variables were considered separately, two of six differences reached statistical significance. Specifically, there was a significant main effect of Gandevani's Work Satisfaction score, $F(1,121) = 7.70$, $p < .01$, partial $\eta^2 = .06$, and Life Satisfaction score, $F(1, 121) = 4.7$, $p < .05$, partial $\eta^2 = .04$, but not for the Minnesota Satisfaction score, $F(1,121) = .30$, $|n.s.$, partial $\eta^2 = .002$, Relationship dimension, $F(1,121) = .87$, $n.s.$, partial $\eta^2 = .01$, Personal Growth or Goal Orientation dimension, $F(1,121) = .004$, $n.s.$, partial $\eta^2 = .01$, and System Maintenance and System Change dimension score, $F(1, 121) = 1.10$, $n.s.$, partial $\eta^2 = .01$.

Table 4

Mean Job Satisfaction, Life Satisfaction and Work Environment Dimensions for Cognitive Style

Scores	Field Independent		Field Dependent		Total	
	M	SD	M	SD	M	SD
Job Satisfaction (MSQ)	3.6	.53	3.6	.59	3.6	.56
Job Satisfaction (Gandevani)	4.4**	1.48	5.2	1.24	4.8	1.36
Life Satisfaction	4.4**	1.46	5.1	1.13	4.8	1.30
Relationship	6.1	2.01	6.4	2.01	6.3	2.01
Personal Growth or Goal Orientation	6.3	1.49	6.1	1.52	6.2	1.51
System Maintenance and System Change	5.1	1.47	5.3	1.64	5.2	1.56

Note. ** $p < .01$

Table 5

Mean Job Satisfaction, Life Satisfaction, and Work Environment Dimensions for Job/Style Match

Scores	Matched		Unmatched		Total	
	M	SD	M	SD	M	SD
Job Satisfaction (MSQ)	3.7*	.48	3.4	.67	3.6	.58
Job Satisfaction (Gandevani)	5.1**	1.34	4.2	1.42	4.7	1.38
Life Satisfaction	5.0**	1.34	4.1	1.21	4.6	1.28
Relationship	6.3	1.94	6.0	2.16	6.2	2.05
Personal Growth or Goal Orientation	6.2	1.32	6.2	1.85	6.2	1.59
System Maintenance and System Change	5.2	1.56	5.1	1.53	5.2	1.55

Note. * $p < .05$, ** $p < .01$

Chapter IV

Discussion

The purpose of the present study was threefold: first, to investigate the relations among job/cognitive style match and the major outcome variables (two measures of job satisfaction, life satisfaction, three work environment dimensions); second, to examine differences on the major outcome variables between those whose job characteristics and cognitive style match versus do not match; and third, to assess differences between those with field independent versus field dependent cognitive style on the outcome variables. The following section will summarize the major findings of this study and propose potential explanations to interpret them.

Kirton (1980) suggested the importance of matching cognitive style to employees' organizational environments. Specifically, he hypothesized that, when there is a mismatch (vs. match) between employees' cognitive styles and their jobs, workers are likely to experience greater sensitivity to the physical and psychological aspects of their organizational environments. Such mismatches might result in higher employee dissatisfaction and stress if the organizational environment is not aligned with its workers' job preferences. The characteristics of those with field independent and dependent cognitive styles provide employers further insight into how employees' organizational environments affect their overall job satisfaction.

Thus, in light of previous theory, it was hypothesized that, when employees' job characteristics match their cognitive style, higher job and life satisfaction would be reported. The findings support this hypothesis. Not surprisingly, the average job satisfaction and life satisfaction scores of participants in this study are higher when employees' cognitive style and job characteristics match than when they do not match. Somewhat surprisingly, however, was that the job satisfaction and work satisfaction of those workers with field dependent cognitive

styles are higher than those of employees with field independent cognitive styles. Perhaps there is some value, or buffering perhaps, in construing work, which occupies so many of our waking hours, as a socially oriented activity.

Further, to ensure that all participants' job titles were provided with accurate estimates of cognitive style, each job title was evaluated through O*Net's occupational information database. Thus, the findings also validate Holland's theory of vocational choice and guidance. Holland's theory has stated that, "Individuals will seek environments which are congruent with their vocational type and will flourish where there is congruence between style and environmental attributes, whereas incongruence will lead to dissatisfaction, unstable career paths and suboptimal performance" (Armstrong et al., 2011). Previous research on lack of person-organization fit has typically focused on goals, values, ethics, climate, and particular personality characteristics. However, Chan (1996) have suggested the importance of considering individuals' cognitive style when examining person-organization fit. Locke (1969) has also found that employees' perceptions of what their jobs offer and what they want from their jobs dictate whether they or not they will be satisfied with their work. Nonetheless, the present investigation represents the first empirical attempt to provide support for such notions, specifically employing the field dependence-independence cognitive style construct.

It is important to note that cognitive styles are adaptive systems of interacting cognitive processes. Environmental influences (e.g., family, education, profession) encourage particular processing approaches. Consider this example of how environmental influences can affect cognitive processing. If an individual has strong interpersonal skills, she or he may exhibit natural interest in writing and in interacting with others. She or he can develop a particular cognitive style (e.g., field dependence) if her or his environment promotes social interactions and

the learning of writing. As she or he continues her or his education, she or he may seek out professions that involve her or his interests in writing and social interaction (e.g., teaching, advertising, social work). Her/his cognitive style will continue to be reinforced to support the interpersonal nature of her or his chosen occupation. As an adaptive system, this individual's cognitive style (field dependence) moderates her or his inherent abilities and the effects of the external environment. On the other hand, if an individual has strong abstract logical reasoning abilities, she or he may have a natural interest in mathematics and science. She or he can develop a particular cognitive style (e.g., field independence) if her or his environment promotes the learning of math and science skills. As she or he continues her or his education in math and science, she or he may seek out further education and/or professions that involve her or his interests in math and sciences. Her/his cognitive style will continue to be reinforced to support the analytic nature of her/his chosen occupation. As an adaptive system, this individual's cognitive style (field independence) moderates her/his inherent abilities and the effects of the external environment.

Further, given previous literature on the moderate to strong correlation between job and life satisfaction, it was expected here that individuals who score high on job satisfaction would also score high on life satisfaction. For instance, Bavolar (2017) found that, when individuals receive information not in keeping with his or her cognitive style, the individual becomes frustrated and stressed, which leads to lower life satisfaction. In all, higher job and life satisfaction in the present sample (with stronger correlations than in most previous investigations) confirm another of this study's hypotheses, namely, that employees are more likely to report higher satisfaction with their jobs and lives more generally when their cognitive styles and job preferences match.

Previous and current research on field independent and field dependent cognitive styles have conveyed many differences between each style with respect to work context and preferences. However, Witkin and Goodenough (1977) have identified differences in the interpersonal behaviors between those with field independent and field dependent cognitive styles. Their findings have shown that field independent people have an impersonal orientation, which means that they are generally not interested in others and prefer nonsocial situations. Their lack of interest in people demonstrates that they physically and psychologically distance themselves from others. Conversely, field dependent individuals possess an interpersonal orientation, like to be close physically to others, prefer social situations, and are overall more emotionally open with others. In a situation where ambiguity is present, field dependent people use their social referents to help remove the discomfort associated with ambiguity. On the other hand, field independent individuals prefer to keep to themselves in ambiguous situations. In all, the characteristics of field independent and field dependent persons have highlighted the analytical and preferred autonomy of field independent individuals and the importance of socialization and reliance on others for field dependent individuals (Witkin & Goodenough, 1977).

This study measured cognitive style with a combination of the Group Embedded Figures Test and the Frame and Line Test. Witkin argued that his related Rod-and-Frame Test and the Group Embedded Figures Test represent two different constructs. The former examined an individual's perception of verticality while the latter emphasized cognitive restructuring. He emphasized the importance of using both tests and converting it into a composite differentiation index to determine an individual's field independence-field dependence cognitive style (Demick, 2014). Using this method, the present study uncovered significant cognitive style differences

insofar as field dependent individuals are more generally satisfied with both their job and their lives than are field independent individuals.

These findings provide an interestingly take on cognitive style, job satisfaction, and life satisfaction. Since field independent individuals are more analytical, want to achieve, and have an easier time with adjustment, implementation, and career decision-making than field dependent persons, it might be expected that field independent individuals would be more satisfied with their jobs (Witkin et al., 1977). However, researchers have found that, when individuals' jobs and/or organizational environments are not conducive to their cognitive styles, field independent individuals are more likely to restructure and/or restrict their jobs and/or environments. In contrast, field dependent individuals tend to adhere to their organization's dominant cognitive style as given. Since field independent individuals employ specific coping behaviors such as restricting the environment, it may help them handle their frustrations and conflicts among their preferred preferences for problem solving, communication style, and organizational environment in the short run. Unfortunately, however, these coping behaviors can cause great stress and cannot be sustained for long (Brigham et al., 2007). Kirton (1976) found that individuals always seem to return to their preferred decision, learning, and communication styles. This level of stress can in turn lead field independent workers to rate their job satisfaction as lower. On the other hand, field dependent individuals have an unusual sensitivity to the social surround, which may explain their reaction to adhere and confirm to their environments when not conducive to either their jobs or their lives.

Witkin et al. (1977) has identified correlates between field independent and dependent cognitive styles. Some social correlates of field independent individuals are their tendencies to describe others in relatively negative terms, to experience guilt rather than shame, and to prefer

solitary play and socialization patterns emphasizing autonomy and independence. Conversely, correlates of field dependent individuals include knowing and being known by more people, having greater sensitivity to the nuances of social relationships, having greater levels of self-disclosure with others, experiencing shame rather than guilt, and describing others in relatively positive terms (Demick, 2014). Seligman (2002) found that happier people have a greater tendency to like other people related to the notion that constructiveness with others can positively influence life satisfaction. This finding confirms that social correlates and differences between field dependent and field independent cognitive styles may play an important part as to why field dependent individuals here score higher on the job and life satisfaction scales relative to the independent individuals.

The findings also revealed that field independent individuals score higher on the Personal Growth or Goal Orientation dimension (Work Environment Scale) than field dependent individuals. Additionally, when field independent individuals' style and job match, their scores on the Personal Growth Orientation dimension are higher than when field independent individuals' style and job are unmatched. This has suggested that, when field independent individuals' cognitive style and job match, they perceive the Personal Growth Orientation dimension more favorably than field dependent individuals, that is, when style and job are matched or unmatched for field dependent individuals.

The Work Environment Scale measured the individual's perception of his or her work environment. Within this scale, the Personal Growth Orientation dimension consists of three subscales. This set of subscales focuses on the emphasis on independence, getting the job done, and job demands. These dimensions include the autonomy, task orientation, and work pressure subscales. All three subscales contribute to a description of the work setting's goal orientation;

autonomy and task orientation tap personal growth dimensions as well. Given the preferences and characteristics of field independent individuals, it is evident why the interaction between their cognitive styles and jobs produces greater favorability for the Personal Growth Orientation dimension. Further, between the other two dimensions of the Work Environment Scale, the Relationship dimension seems to focus on the characteristics of field dependent individuals. This is because this dimension assesses how committed employees are to their jobs, how friendly the employees are, how supportive they are of each other, and how supportive managers are of employees.

One proposed explanation as to why an interaction between field dependent and a match with their cognitive style and job characteristics did not occur on this dimension may be because field dependent individuals are strongly influenced by their social environment (e.g., recommendations from professors, parents, friends, coworkers), external reinforcement (economic considerations), and their tendency to rely on others for guidance (Witkin & Goodenough, 1977). Since the Work Environment Scale assess an individual's perception of his or her work environment, a field dependent individual might be easily swayed to perceive his or her environment as either more or less favorable even if job and cognitive style match.

Research on sex and cognitive style has found females to be typically more field dependent than males (Demick, 2014). Booth and Lantz (1997) also found men and women to differ in their expectations of work environments but not in their perceptions of their actual work environment (Wooten, 1994). However, differences in expectations between the sexes may be due to sex-typed expectations of specific careers that have been traditionally gender based. In this study, sex was significantly correlated with System Maintenance and System Change dimension. In other words, females view System Maintenance and System Change in a more

related way than males. This is the last dimension in the Work Environment Scale, assessing the work setting's emphasis on rules and policies and on variety and innovation; it also taps the pleasantness of the physical setting. The four subscales in this domain are Clarity, Control, Innovation, and Physical Comfort. One possible explanation for the relations between females and the System Maintenance and System Change dimension might be work context differences between jobs that have a higher percentage of females than males. For example, according to the United States Census Bureau (2018), 73% of females while 27% of males work in education as teachers. The work context in O*Net for teachers found that 59% report the freedom to make decisions and 66% report the frequency of decision making to be daily, which touches on the innovation subscale that measures the degree of emphasis on variety, changes, and new approaches (O*Net, 2019). Additionally, 75% report that there is constant contact with others; 86% of teachers report face-to-face discussions daily and 51% report that the daily physical proximity with others is very close, near touching (O*Net, 2019). These findings support the physical comfort subscale as it measures the extent to which the physical surroundings contribute to a pleasurable work environment. As for the last subscale within the System Maintenance and System Change dimension, work activities of teachers include developing specific goals and plans to prioritize, organize, and accomplish one's work. Since teachers are generally in control of their own classrooms, it is suggested that females might imbue clarity, the third subscale, with more importance because this subscale taps the extent to which employees know what to expect in their daily routine.

Conclusion

As expected, this study found that, when there was a match between an individual's cognitive style and job, higher job and life satisfaction scores are reported relative to when there

is a mismatch between an individual's style and job. Gandevani's Job Satisfaction Scale and the Life Satisfaction scales were found to be strongly associated with each other, suggesting that people who are more satisfied with their jobs are also more satisfied with their lives. This effect was even more pronounced for field dependent individuals since this study found field dependent individuals more satisfied with their jobs and lives overall than field independent individuals.

Additionally, an interaction between cognitive style and job/style match found that, when field independent individuals' style and job match, they perceive the Personal Growth Orientation dimension as more favorable than field independent individuals with unmatched job/styles or than field dependent individuals. Finally, females view the System Maintenance and System Change dimension as more important than males. One possible explanation for the correlation between sex and System Maintenance and System Change dimension scores among females might be the work context differences between jobs that have a higher percentage of females than males.

In sum, this study provides additional documentation that cognitive style and job match are important variables that enhance job and life satisfaction. Further, these findings imply that a field dependent cognitive style is more advantageous than a field independent cognitive style since the former experience greater levels of job and life satisfaction (unlike previous criticisms leveled at the field dependence-independence construct that have seen an advantage to being field independent). Thus, cognitive style assessments—and field dependence-independence cognitive style assessments in particular—might serve as a better tool to screen for employee/employer fit because such assessments have the potential to increase employee job and life satisfaction, minimize the stress of poor fit, reduce the cost of turnover for the employer, and

help both workers and those who employ them be better prepared when there are mismatches in job or organizational characteristics.

Finally, future research on field independence-field dependence may consider cognitive styles to either be fixed or mobile. That is, an individual most likely is able to shift his or her cognitive style depending on the demands of the situation or context (Demick, 2014). However, how best to define mobility-fixity operationally is still being explored.

Limitations

Although the current research provides valuable insight into job and life satisfaction and the importance for individuals to match their cognitive style and job characteristics it is important to acknowledge the study's limitations. First, while the study does find strong relations between cognitive style and job match, the research is limited by its design. The data are cross-sectional; therefore, causal directions between style and job match cannot be inferred. Further, while the study also finds strong relations among field dependent cognitive style, job, and life satisfaction, causal directions also cannot be inferred. Although a theoretical framework indicating how style and job match and a field dependent cognitive style may contribute to a more satisfied job and life has been offered, future work should examine these constructs over time, ideally employing longitudinal designs to corroborate these findings.

Further, another limitation that stems from the study's design is the nature of self-report questionnaires, which are less than ideal ways to measure job satisfaction, life satisfaction, and work environment related to their inherent biases, including but not limited to social desirability bias. Future research might incorporate methods such as observation and experimentation to overcome these biases. A final limitation, clearly worthy of further empirical scrutiny, concerns

whether job/cognitive style match leads not only to greater satisfaction with one's job (and with one's life) but also to one's greater proficiency at doing one's job.

However, in line with the above, the present investigation is most powerful insofar as it suggests that job/cognitive style match leads to greater job satisfaction, which as found here is almost indistinguishable from greater life satisfaction (regardless of job proficiency). Thus, this finding takes on monumental proportions insofar as most of us spend more waking hours in work-related activity than in any other human enterprise. Thus, the job/cognitive style match construct might also be used profitably within the subfield of industrial-organizational psychology to generate further research on such problems as the role of the job/style match in job analysis, job performance, staffing decisions, training and development, motivation to work, stress and worker wellbeing, and leadership and work teams. Research on these and related problems has the potential to occupy industrial-organizational psychologists for some time to come ultimately to improve the quality of our lives both within and outside of the contexts of work.

Appendix

Survey Instrument

CONSENT FORM

The following is a short summary of this study to help you decide whether or not to be a part of it. More detailed information is listed later on in this form.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are a working adult.

What should I know about a research study?

- Whether or not you take part is up to you.
- Your participation is completely voluntary.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide.

Why is this research being done?

Lack of employee-job fit is a major reason why employees leave their jobs (Thompson, 1985). Employees seek a fit among their personal, job and organizational characteristics (Armstrong, Cools, & Sadler-Smith, 2011). Thus, this research examines the relations between employees, personal characteristics and job satisfaction.

How long will the research last and what will I need to do?

We expect this research to take about 30 minutes.

You will be asked to complete a total of 7 quick tests and or tasks. All your answers will be anonymous.

Is there any way being in this study could be bad for me?

We don't believe there are any risks from participating in this research.

Will being in this study help me in any way?

We cannot promise any benefits to others from your taking part in this research. However, possible benefits include understanding personal characteristics may have in the workplace as well as help employers be better prepared when there are differences in job or organizational characteristics.

What happens if I say yes, but I change my mind later?

You can leave the research at any time it will not be held against you.

Please answer the following questions about yourself:

1) Sex:

- Female
- Male
- Other

2) Age:

3) Race/Ethnicity:

- American Indian or Alaska Native
- Asian
- Black or African American
- Latino or Hispanic
- Native Hawaiian or Pacific Islander
- White
- Two or More Races/ Ethnicities

4) Highest Level of Educational Attainment:

- Some high school
- High school graduate / G.E.D.
- Some college / Associate's degree
- Bachelor's degree
- M.A./J.D./M.B.A or other Master's degree
- Ph.D./M.D.

5) What is your marital status?

- Single
- Married
- Separated
- Divorced
- Widowed

6) What is your job title?

7) How long have you worked at your current job title?

- < 1 year
- 1-3 years

- 3-5 years
 - 5-10 years
 - 10 years
- 8) For how long have you worked in your current organization?
- <1 year
 - 1-3 years
 - 3-5 years
 - 5-10 years
 - >10 years

Please rate how satisfied you are with this aspect of your job from not satisfied to extremely satisfied.

- 9) Being able to keep busy all the time.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 10) The chance to work alone on the job.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 11) The chance to do different things from time to time.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 12) The chance to be "somebody" in the community.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied

- Extremely Satisfied
- 13) The way my boss handles his/her workers.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 14) The competence of my supervisor in making decisions.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 15) Being able to do things that don't go against my conscience.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 16) The way my job provides for steady employment.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 17) The chance to do things for other people.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied
 - Very Satisfied
 - Extremely Satisfied
- 18) The chance to tell people what to do.
- Not Satisfied
 - Somewhat Satisfied
 - Satisfied

- Very Satisfied
- Extremely Satisfied

19) The chance to do something that makes use of my abilities.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

20) The way company policies are put into practice.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

21) My pay and the amount of work I do.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

22) The chances of advancement of this job.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

23) The freedom to use my own judgement.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

24) The chance to try my own methods of doing the job.

- Not Satisfied
- Somewhat Satisfied

- Satisfied
- Very Satisfied
- Extremely Satisfied

25) The working conditions.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

26) The way my co-workers get along with each other.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

27) The praise I get for doing a good job.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

28) The feeling of accomplishment I get from the job.

- Not Satisfied
- Somewhat Satisfied
- Satisfied
- Very Satisfied
- Extremely Satisfied

Please rate how satisfied you are with your job and life from strongly disagree to strongly agree.

29) In most ways my life is close to my ideal.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree

- Strongly Agree

30) The conditions of my life are excellent.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

31) I am satisfied with my life.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

32) So far I have gotten the important things I want in life.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

33) If I could live my life over, I would change almost nothing.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

34) In most ways my job is close to my ideal.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

35) The conditions of my job are excellent.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

36) I am satisfied with my job.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

37) So far I have gotten the important things I want in my job.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree
- Agree
- Strongly Agree

38) If I could live my life over, I would change almost nothing about my job.

- Strongly Disagree
- Disagree
- Slightly Disagree
- Neither Agree nor Disagree
- Slightly Agree

- Agree
- Strongly Agree

You will be asked to complete a survey about your current work environment. Please decide which statements are true or false. (Questions 40-129, Two example questions are shown below)

39) The work is really challenging.

- True
- False

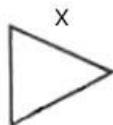
40) People go out of their way to help a new employee feel comfortable.

- True
- False

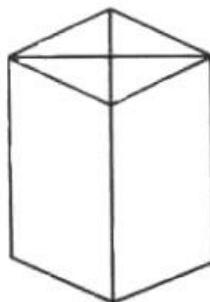
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Please click on the link below to complete 1 task. When you finish the task, you will be asked to enter in your unique 5-character code. Please open up this link in a new tab. You will have one more task to complete after this. (An example is shown below)

Here is a simple form which we have labeled "X":



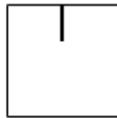
This simple form, named "X", is hidden within the more complex figure below:



For the completion of this study, please click on the link below to complete 1 task. Before you begin the task, you will be asked to enter in your unique 5-character code. (An example is shown below)

1

You will briefly see a square with a line. Pay close attention to the length of the line.

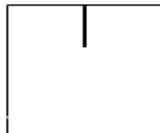


In this example, the line is 1/3 of the height of the square.

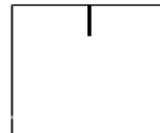
2

You will now see a square of a different size, and in a different place on the screen.

Redraw a line with the same proportion to the frame as the one you saw before.



Correct! The line is again 1/3 of the height of the square.



This line is not 1/3 of the height of the square, but has a different proportional length.

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