

Personal Intelligence in the Workplace and Relationships

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Abstract

The predictive ability of personal intelligence (PI), the ability to understand and apply personality-related information, was examined in relation to the workplace and social relationships. We predicted that two measures of PI, an objective test, the mini (12 item) test of personal intelligence (TOPI), and a self-estimated test, the self-estimated personal intelligence scale (SEPI), would relate to job satisfaction, indicators of leadership, positive organizational workplace behavior, and social support. Vocabulary tests and the backwards digit span served as traditional intelligence measures. Several measures of workplace behavior and social support were administered. Participants were 378 adults who worked full-time in the U.S. PI was related to some workplace related characteristics, especially the absence of deviant behaviors, as well as social support in general. PI was associated with workplace behaviors and social outcomes above and beyond traditional measures of intelligence, supporting PI's usefulness as a novel form of intelligence. However, the study was limited by the low variance/reliability of the TOPI scores relative to the SEPI. Future research should use the longer TOPI version or redevelop the mini TOPI. The study findings suggest that understanding personality may relate to some positive workplace characteristics and support healthy relationships.

Keywords: personal intelligence, work, intelligence, relationships

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Personal Intelligence in the Workplace and Relationships

People have been trying to understand themselves and others for thousands of years, and there is some evidence that making personality judgments is a universal phenomenon (Mayer, Korogodsky, & Lin, 2011). Making judgments of another's personality is likely to be adaptive, because accurately recognizing that "this person is kind" or "this person is angry and unpredictable" increases the odds of survival. This study will explore whether understanding of personality is adaptive in today's world. We believe that understanding personality may allow us to make career decisions, deal with other people effectively, and navigate the complex social world around us. The ability to solve complex social problems and make social judgments has been increasingly recognized as crucial to leadership (Mumford, Zaccaro, Harding, Jacobs, & Fleishman, 2000), so the topic of how understanding personality relates to overall functioning in a variety of domains is a relevant one.

A recently proposed type of intelligence called personal intelligence may relate to these domains. Personal intelligence is defined as the "ability to reason about personality and its processes, as applied to oneself and others" (Mayer, Panter, & Caruso, 2012a). It may have profound interactions with individuals' career paths, workplace behavior, and social relationships. However, researchers of intelligence recognize that we have not yet thoroughly demonstrated that nontraditional measures of intelligence, such as personal intelligence, contribute to understanding intelligent behavior beyond general IQ measures (Nisbett et al., 2012a). This study seeks to explore and validate the construct of personal intelligence using an ability-based measure and a self-estimated measure. We will investigate how personal intelligence may operate in the workplace and in one's relationships, with the goal of attaining an

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accurate conceptualization of personal intelligence and demonstrating its usefulness as a measure of intelligence.

Models of Intelligence

Intelligence is a multifaceted concept, but in general, it is the ability to reason, solve problems, make decisions, and perform other high order thinking skills (Gottfredson, 1997). Intelligence can be defined and measured with many different tests, including tests of vocabulary, mathematical reasoning, learned information, working memory, and problem solving abilities. It is normally conceptualized as a hierarchical structure derived from factor analysis. Spearman's general intelligence (*g*) is often as the first factor extracted from factor analyses of many different IQ subtests. Because it accounts for more of the variance on IQ tests than any other factor, researchers generally regard intelligence scores as estimates of general intelligences (Nisbett et al., 2012b).

Throughout the 20th century, intelligence research focused on verbal-comprehension and perceptual-organizational abilities. These intelligences can be considered "cool intelligences" in that they concern abstract information and the rules of symbol manipulation that have little direct personal and real-world impact (Mayer, Caruso, Panter, & Salovey, 2012). It is generally acknowledged that measuring one's IQ is useful because intelligence often predicts grades at school and performance at work, along with other significant life outcomes (Judge, Ilies, & Colbert, 2004; Nisbett et al., 2012b). Intelligence has been shown to relate to social life in some ways, such as when it comes to performing routine transactions and explaining information to other people (Gottfredson, 1997), but there are kinds of information-processing abilities that more directly deal with personally relevant information (Mayer, Caruso, & Salovey, 2000).

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Models of intelligences have begun to include a broader array of mental abilities via the recognition of “hot intelligences.”

Hot intelligences include reasoning about information that is personally relevant to one’s life and personal decisions, as in emotional, social, and practical intelligences (Mayer et al., 2012a). Emotional intelligence, for example, the hot intelligence that has received the most mainstream attention, involves the ability to recognize and manage emotions, and it has been recognized as particularly influential in the workplace (Rivers et al., 2012). Researchers have begun to explore the idea that personality, creativity, and other forms of ability could be more relevant than traditional measures of IQ when it comes to predicting life decisions and success (Heaven & Ciarrochi, 2012). Hot intelligences allow the direct assessment of important factors that traditional intelligences do not fully capture: practical problem solving, social competence, and the ability to maneuver in everyday life. Thus, hot intelligences may not only relate to measures of performance, but also to measures of social support and quality of relationships that address overall psychological functioning.

Model of Personal Intelligence

Personal intelligence could be known as “personality intelligence” because it deals with the ability to discern and use personality information (Mayer, 2008). Personal intelligence (PI) is represented in a four-component model. The first component is the recognition of personality relevant information about oneself and others. The second component involves the formation of accurate models of personality about others and oneself from that information. The third component involves using these models to guide one’s choices, and the final one involves systematizing one’s goals, plans, and life stories to manage one’s personal growth and needs (Mayer, 2008). These components make up the four branches of the model of PI, which are

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interrelated (Mayer et al., 2012a). Personal intelligence thus provides us with a holistic model of human functioning, because personality relates to one's understanding of motivations and behaviors, one's ability to learn from the past and plan for the future, and one's ability to promote self-development (Mayer, 2008). Thus, someone with high PI might easily notice patterns of behavior in themselves and others, conclude that she would fit best in an artistic career, and motivate herself towards her goals. Her PI may allow her to make appropriate life choices according to her system of personal values, resulting in life satisfaction, workplace success, and positive relationships with others.

Several hot intelligences, such as emotional or social intelligence, may be related to PI because that it is likely that hot intelligences all involve similar reasoning (Mayer et al., 2012a). Some may ask why personal intelligence is a useful concept. There is some question as to the usefulness of understanding personality to the modern society, because situational factors and cognitive factors are more heavily emphasized in some domains. The current study attempts to address this question, but we already know that judgments about others' personalities are a worldwide practice, distinct from narrower models of social abilities or emotional recognition (Mayer et al., 2011; Mayer, 2008). Our understanding of personality is a ubiquitous feature in our everyday life often neglected by scientific study. Judgments of personality have been around for millennia, and if understanding personality is an adaptation key to survival, then our abilities to understand people as complex individuals will help us in the world. If this is true, PI is a construct with great predictive power.

The model of PI allows us to make some predictions about behaviors. Preliminary PI research indicates that people with high PI have high self-awareness and are able to understand character traits well (Mayer, 2008). For example, they may be better able to understand

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characters' motivations and personalities in fiction or biographies. Theory suggests that people with low PI may suffer because of their inability to understand individual differences: they may fail to recognize situations that contradict one's personal values, exhibit inconsistent goals, and employ ineffective approaches when dealing with other people (Mayer, 2009). A multiple case study of well-known business leaders indicated that people with high PI tend to draw regularly on their life histories and inner convictions as a means of motivation, while also remaining sensitive to others' individual differences (Mayer, Wilson, & Hazelwood, 2010). In this study, high PI leaders were explicitly candid about how their self-understanding had helped them succeed in life. Low PI individuals, in contrast, exhibited none of those characteristics. They, in fact, expressed disinterest in self-exploration and often made exaggerated claims about their likeability. Another study indicated that PI is related to propensity for self-exploration and may buffer against narcissistic beliefs that lead to unrealistic concepts of self (Mayer et al., 2012a). However, this research is preliminary, and the current study will attempt to add more depth to our knowledge about PI.

Previous studies provide limited theoretical background for our study, because few studies about PI have been completed thus far (Mayer et al., 2010; Mayer et al., 2012a), but we know that cognitive ability, personality, and hot intelligences play a role in many important life outcomes, such as occupational achievement and relationship status (Boyatzis, Good, & Massa, 2012; Lopes, Salovey, Côté, Beers, & Petty 2005). Thus, we can use our current knowledge of intelligence, hot intelligence, and PI to make some novel predictions about PI.

This research study will examine three main research questions: (1) Is PI associated with positive outcomes in the workplace (e.g., job satisfaction, work achievement, the nature of one's

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work, and work behaviors)? (2) Is PI associated with strong social support and quality personal relationships?, and (3) Can PI be conceptualized as an form of intelligence?

Personal Intelligence in the Workplace

Our first area of interest involves how PI operates in the workplace. Specifically, we predict that PI is related to job satisfaction, leadership characteristics, and positive organizational behaviors. Although few studies have been performed with PI, several studies have examined whether hot intelligences correlate with motivation and satisfaction with life. Emotional intelligence (EI) is correlated positively with job satisfaction (Brackett, Rivers, & Salovey, 2011). Because EI and PI are related hot intelligences (Mayer et al., 2012a), we predict that people with high PI may have high work-related satisfaction. High PI individuals are well equipped to draw on their life experiences realistically and work well with other people (Mayer, 2009). Their understanding of their values and goals may lead them to acquire jobs that they find personally meaningful. Because knowledge of personality allows people to understand themselves and others better, we believe that these processes that allow career success and development would be expressed via their satisfaction with their career and perceived importance of their career. For example, people high on PI might be more interested in taking career tests that help them identify and develop their interests, leading them to subsequently focus on careers that are congruent with their abilities and interests. This may lead to long-term career satisfaction.

Various studies have reported that traditional (i.e., “cold”) intelligences are moderately related to leadership qualities, as well as academic and job performance. Dealing with complex decisions relies on cognitive ability, and some researchers have said that no trait predicts so many real-world outcomes as intelligence predicts (Judge et al., 2004). However, there have

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been claims that emotional intelligence relates to achievement and performance more than general measures of intelligences (Waterhouse, 2006). The recent recognition that EI can help predict leadership capacity indicates that hot intelligences may have an important place in predicting life outcomes in the workplace (Mills, 2009). In one study, military students with high EI perceived themselves as more successful than those with low EI (O'Connor, 2003). However, other studies have found that EI did not relate to success when they relied upon objective measures of academic success. One study found that EI did not relate to students' cumulative GPA (O'Connor, 2003). However, it is questionable whether college students have enough life experience to have developed their emotional intelligence, so people in the workplace may provide more useful information than students. Several studies looking at EI in relation to workplace performance have found that EI is related to more positive peer ratings, greater merit-based pay increases, and higher quality work performance (Brackett et al., 2011). In some cases, emotional and social intelligence have been found to predict performance beyond measures of general intelligence (Boyatzis et al., 2012). It is widely acknowledged that intrapersonal and interpersonal skills can play important leadership roles, and overall, studies indicate that that EI is a useful component in predicting leadership behavior (Brackett et al. 2011; Mills 2009; Rivers et al., 2012; Walter, Cole, van der Vegt, Rubin, & Bommer, 2012). Since personality addresses a wider model of human functioning than emotion, we believe that PI may relate to leadership and workplace success.

PI's relationship to leadership and workplace success is not yet known, although preliminary research suggests that some business leaders utilize their PI to achieve success (Mayer et al., 2010). Mayer et al. (2010) hypothesized that trade-offs are involved when leaders lack high PI. Leaders who lack high PI levels cannot rely on their understanding of themselves

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and others to be successful, so they tend to gain their success by employing other abilities, such as forcefulness or unique skill (Mayer et al., 2010). In that case, high PI may mediate workplace success, but it may not be crucial to it. More research would need to be conducted to determine whether the general population of effective business leaders with high PI is higher than expected. However, because social problem-solving skills are important in leadership, and other hot intelligence research demonstrates the relationship with leadership, we believe PI may be related to success and capacity for leadership roles (Mumford et al., 2000).

We conjecture that because an understanding of people is often required to achieve workplace success, understanding personality can lead people to perform more appropriately in the workplace, performing less deviant behaviors and more positive social behaviors. There is some evidence that EI relates to positive social functioning and engagement (Boyatzis et al., 2012). We conjecture that PI leads to the similar results. There is some evidence, however, that EI relates to organizational deviance, possibly because the ability to perceive emotions better can lead to effective manipulation of others (Winkel, Wyland, Shaffer, & Clason, 2011). This intriguing dark side of EI does not show up in many studies of EI in the workplace, but PI's relationship to workplace behaviors remains to be known. Because most studies indicate EI relates to positive functioning in the workplace, we predict that PI will relate to positive functioning as well (Rivers et al., 2012; Brackett et al., 2011).

Personal Intelligence in Social Relationships

Our second area of interest is PI and social relationships. We predict that PI will be related to higher quality relationships in and outside of the workplace. PI research suggests that people with high PI are more realistic regarding their self-conceptions and are better judges of character, which may affect their social and romantic relationships as well as their workplace

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behaviors (Mayer et al., 2010). Many studies demonstrate links between EI and quality of romantic and social relationships (Lopes et al., 2005; Schröder-Abé & Schütz, 2011). EI is related to higher quality of relationships and greater levels of social support even when personality is taken into account (Lopes et al., 2005; Di Fabio & Kenny, 2012). Self-reported and peer-nominations of interpersonal sensitivity also correlate with EI (Lopes et al., 2005). This indicates that high EI is obvious to oneself and one's peers and has a real effect on others' lives. EI is generally related to healthier psychological functioning and social competence (Rivers et al., 2012). This research allows us to predict that PI will operate similarly.

In this study we will explore PI and relationship status in a large, diverse sample of adults. High PI individuals may be more likely than low PI individuals to be in a committed relationship in general. We predict that in general, high PI helps form and maintain satisfying social relationships. This prediction is useful in examining life outcomes such as resilience and psychological health. If our predictions are supported, PI may be associated with a lowered risk of mental illness and poor life outcomes due to the ability to relate with other people and form strong social networks (Mayer, 2009). People with good social networks in general probably also form them in the workplace. If people with high PI are better at working with people and enjoy working with people more than those with low PI, people should self-select careers that allow them to work with other people and form positive relationships with their coworkers. As we can see, high intelligences may contribute to various life outcomes in workplace and social relationships. The predictive capacity of PI should demonstrate that understanding personality is adaptive, but we also seek to further validate PI as an expression of intelligence.

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Personal Intelligence as an Intelligence

We predict that PI is best conceptualized as a form of intelligence. Studies have not yet fully explored how PI operates on a behavioral level, so the current study will demonstrate how PI might contribute to our knowledge about intelligent behavior. Mayer, Panter, and Caruso (2012a) found that PI correlates moderately with scores of vocabulary. Emotional intelligence correlates with verbal intelligence as well (Hogan et al., 2010), and these moderate relationships indicate that while hot intelligences relate to conventional measures of verbal comprehension and possibly measures of academic success, it may be useful beyond that. EI uniquely explains measures of performance and predicts high quality relationships over and beyond traditional intelligence (Lopes et al. 2005; Lam & Kirby, 2002). Practical intelligence has also been found to predict academic and occupational achievement beyond IQ (Sternberg, 2006). Our major goal is to evaluate PI not only as a form of intelligence, but as one that contributes to useful knowledge about other people. Thus, models that only use demographics and measures of intelligence as predictors may be substantially improved by factoring in PI.

Intelligence cannot be validly self-estimated (Mayer et al., 2012a). Correlations between self-reports of intelligence and IQ scores are relatively low ($r = .20-.25$), so self-estimated intelligence is not very useful as a proxy of intelligence. The accuracy of self-reported intelligence is limited because few claim low levels of intelligence (Paulhus, Lysy, & Yik 1998). How intelligent people believe they are can differ greatly from how intelligent people actually are. O'Connor found that a cognitive measure predicted different variables than a self-report measure of EI (2003). For example, the self-report measure mostly correlated with personality, unlike the ability measure. This finding suggests that there may be differences between the same hot intelligences when conceptualized in an ability measure than a self-report measure. In fact,

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self-reported EI and ability EI may be seen as separate constructs rather than two different ways of measuring the same construct. EI can be conceptualized as the ability to perceive, understand, and manage emotions, or it can be conceptualized as motivation, dispositions, traits, and overall personal/social functioning (Mayer, Caruso, & Salovey, 2000). The latter conceptualization, however, is not an intelligence because it does not relate directly to problem-solving, and it is important to distinguish between self-reported intelligence and actual intelligence. We believe that conceptualizing PI as an ability provides a model of intelligence.

An ability-based measure of personal intelligence has been developed by Mayer et al. (2012a) that measures objective skill on a test based on the four component model. In their study, the authors developed the Test of Personal Intelligence (TOPI), a 134-item measure of PI, and demonstrated that the four domains in the model of PI are interrelated. The TOPI asks multiple-choice questions about the rules of personality and individual variation with objective answers based on empirical findings from personality literature so that it examines an individual's success at understanding personality at a general level. For example, one item asked "Someone who you don't get along with at work mentions you completed a project very well, then asks for a favor – why?" The correct answer is that they "said positive things to persuade you to grant the favor" (Mayer et al., 2012a). The study results indicated that the TOPI was positively related to agreeableness, conscientiousness and openness to experience, but because all of the correlations were .21 or below among three different studies, this moderate correlation is not enough to indicate that personal intelligence is a measure of personality alone. The fact that general intelligence relates to openness to experience, with a correlation around .30, supports this fact (Ackerman & Heggestad, 1997). Personality or motivation-related factors may be related with one's cognitive abilities, but they are still distinct constructs.

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It is likely that PI research can provide useful information about individual behavior that relates to intelligence. There are concerns that hot intelligences do not provide useful information; that is, that they do not predict anything more than what general measures of IQ can predict (Nisbett et al., 2012a). Thus, this article aims to show that PI influences life outcomes when controlling for general measures of intelligence. We believe that PI is a type of intelligence, and thus, it should have a moderate correlation with other forms of intelligence. This is because forms of intelligences are mediated by the factor of general intelligence (Nisbett et al., 2012b). However, PI most likely measures different factors than intelligence does. We will use a measure of verbal intelligence and a measure of nonverbal intelligence to examine PI's relationship with traditional intelligences. A major goal of this study is to place PI in a model predicting achievement, workplace behaviors, social support, and other life outcomes; but in order to make this information meaningful, PI must predict more than general intelligence does by itself.

For PI to be an intelligence, it must be ability-based, reflecting actual problem-solving capabilities rather than self-reported capabilities. We predict that an ability-based measure of PI, as in all intelligences, will outperform a self-reported PI at predicting outcomes. A self-estimated measure of PI has been developed to compare with the objective ability based measure (TOPI) (Mayer et al. 2012b). It is difficult to predict what characteristics the self-estimated and ability-based measures of PI will measure, but we believe they will overlap incompletely. For example, the self-estimated PI measure (SEPI) might relate to job satisfaction more than the test of personal intelligence (TOPI), which may relate more to the propensity of having a leadership position. As an intelligence, PI may have a heritable aspect but should develop over time and be more useful as a predictor than how intelligent people think they are. If our prediction is

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supported, and, for example, the TOPI correlates with leadership characteristics more than the SEPI does, this finding helps validate the ability-based measure of the construct. Similar results would lead us to conclude that PI is best conceptualized as an ability-based intelligence distinct from personality.

The Current Study

Since our understanding of personality is adaptive, and since there is evidence that hot intelligences have predictive capacity, we can make a variety of predictions about how PI operates (a) in the workplace; (b) in social relationships, and (c) as an intelligence. First, we hypothesize that individuals with high PI will report having more personally meaningful and satisfying jobs than those with low PI. Next, we hypothesize that individuals with high PI are more likely to exhibit more indicators of success and leadership characteristics than individuals with low PI: that is, they tend to be older, more educated, supervise more employees, and earn more than people with low PI. They also may have more challenging, complex jobs that allow for greater autonomy at work. High PI workers should also perform positive organizational behaviors at work and be less likely to perform counterproductive behaviors at work compared to low PI workers.

Second, we hypothesize that individuals with high PI will report higher quality social and romantic relationships than those with low PI. They will be more likely to be in serious relationships and will report higher levels of social support than those with low PI. High PI adults will tend to enjoy working with people more than individuals with low PI. They may work in larger teams more often and report better interactions with people in the workplace.

Finally, we hypothesize that PI will correlate moderately with measures of traditional intelligence and will predict positive workplace functioning and high quality social relationships

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even when traditional measures are taken into account. We predict that an ability-based measure of PI will more strongly predict outcomes than a self-estimated measure of PI.

Method

Participants

Participants were 378 full-time (working 35 hours or more per week) workers in the U.S. They were recruited from Amazon Mechanical Turk (mTurk), a crowd-sourcing internet market that compensates participants for performing various tasks such as psychological surveys, data-entry tasks, and translation tasks. They were compensated with seventy-five cents for their participation. They were 54.7% women and 86.4% White, while 18.7% reported other racial/ethnic backgrounds. Participants ranged in age from 18 to 65 years, with a mean age of 34.35 years. Most participants were married (39.9%) with a four-year college degree (38.7%) or some college (28.3%). Table 1 presents several demographic characteristics of the participants.

Nearly all participants had one job (83.8%) and worked a mean of 41.96 hours per week. The mean year participants began working at their current main job was 2007, with a range from 1970 to 2013. Most workers (27.3%) had a household income of \$25,000 - \$39,999. Participants tended to supervise no employees (58.7%) and work in teams of 6-10 people (29.2%). Most participants worked as employees for a private, for-profit company (66.0%), with the highest numbers working in a sales-related (11.6%) or education/library-related (10.3%) occupation.

Measures

The survey consisted of tests of personal intelligence and traditional intelligence, questions about the participants' full-time job and workplace behaviors and workplace characteristics, and a scale assessing personal relationships. We also included attention checks.

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Personal Intelligence

Test of Personal Intelligence Mini. The TOPI Mini-12 was developed to be a brief ability-based measure of PI, modified from the 134-item TOPI (Mayer, Panter, & Caruso, 2012c). Like the full TOPI, it is a multiple-choice questionnaire with three distracters and one correct answer. The final score is a sum of the correctly answered items. The correlation between the mini TOPI and the full TOPI was .87, and the reliability of the TOPI mini was between $\alpha = .69$ and $.81$ in several studies (Mayer et al., 2012c).

Self-estimated Personal Intelligence. The self-estimated personal intelligence scale (SEPI), currently defined in unpublished research by Mayer, Panter, and Caruso (2012b), measures one's self-reported PI using 50 items measured on a seven-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with four provisional subscales. A sample item from the SEPI is: "I know what I am good at." The reliability of four SEPI factors ranged from $\alpha = .82$ - $.91$ (Mayer et al., 2012b). One item was accidentally excluded in the current study.

Traditional Measures of Intelligence

Modified Vocabulary Test. This test is a 30-item multiple choice vocabulary test with one correct answer and three distracters, which serves as a measure of verbal intelligence (Pucci & Viard, 1995). It was modified from the Army Alpha test of intelligence and has a reliability of $\alpha = .88$ (Mayer et al, 2012a). One item was omitted due to not having a correct answer.

Wordsumplus. The Wordsum is a brief ten-item vocabulary subtest that has been used by the General Social Survey since 1974 (Cor, Haertel, Krosnich, & Malhotra, 2012). A 2012 study improved the Wordsum by adding four items based on the principles of Item Response Theory. The Cronbach's alpha of the new test is $\alpha = .79$ (Cor et al., 2012). Our study uses it as a additional brief measure of verbal intelligence.

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Backwards Digit Span. The Backwards Digit Span (BDS) is a test that is often a subscale of intelligence or memory tests, such as the Wechsler Adult Intelligence Scales, and is a commonly used measure of working memory capacity (Ostrosky-Solis & Lozano, 2006). It was used as a proxy for nonverbal intelligence in this study. It is a measure of working memory adapted to online format, in which participants were shown a series of numbers and then recalled and reported these numbers. There were four sets of two numbers and two sets of three numbers that gradually increased to two sets of eight numbers. If the participant failed both trials out of a two-digit set, the test was discontinued. The test reports a reliability of $\alpha = .76$ (Swancom & Beebe-Frankenberger, 2004).

Work-Related Variables

Job Satisfaction Scale. The Job Satisfaction Scale is a three-item scale measuring job satisfaction, with one additional item concerning intention to turnover, which asks whether participants plan to find a new job in the near future (Cammann, Fichman, Jenkins, & Klesh, 1983). The items are on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Coefficient alpha values ranged from $\alpha = .67$ to $.95$ in a variety of studies (Fields, 2002).

Work Design Questionnaire. The Work Design Questionnaire (Morgeson & Humphrey, 2006) is a measure assessing characteristics of one's work and workplace with items on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). It consists of four sections: Task Characteristics, Knowledge Characteristics, Social Characteristics, and Work Context. Of the 21 constructs assessed, this study used seven. Decision-Making Autonomy was measured by three items asking if the job allows personal judgment regarding work tasks. Task Significance was measured by four items measuring whether one's work is significant in impact

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outside of one's organization. Job Complexity was measured by four items about the simplicity/complexity of job-related tasks. Problem Solving was measured by four items about the requirement of creativity and unique solutions on the job. Six items assessed Social Support, asking whether the job provides opportunities for friendships and whether people are friendly at work. The extent of Interaction outside Organization was assessed through four items asking whether the job requires interaction with others not within one's organization. Three items each assessed Initiated Interdependence (others' reliance on the participant to complete their work) and Received Interdependence (reliance on others to complete one's work) (Morgeson & Humphrey, 2006). The average reliability across all scales was $\alpha = .87$.

Organizational Citizenship Behavior Checklist. The Organizational Citizenship Behavior Checklist (OCB-C; Fox, Spector, Goh, Bruursema, & Kessler, 2011) is a 20-item scale that assesses the frequency of organizational citizenship behaviors performed by employees at work. Organizational citizenship behaviors are helpful behaviors that support the social fabric of the organization outside of core job. The OCB-C asks about frequency of acts that benefit the organization and acts that help co-workers deal with work-related issues (e.g., finishing work for a co-worker, saying good things about one's employer, volunteering to do a difficult task). It uses a five-point scale of *never*, *once or twice*, *once or twice per month*, *once or twice per week*, and *every day*. The total score is a sum of the responses to the items. The reliability was $\alpha = .89$ and $.94$ in two different samples (Fox et al., 2011).

Counterproductive Work Behavior Checklist. The Counterproductive Work Behavior Checklist (CWB-C) is a 32-item scale that assesses the frequency of counterproductive work behavior. It contains five subscales: Abuse (17 items about harmful or aggressive behaviors towards coworkers), Productive Deviance (three items assessing intentional failure to perform

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one's job effectively), Sabotage (three items assessing intentional destruction of employer's supplies), Theft (five items assessing the prevalence of stealing), and Withdrawal (four items assessing prevalence of leaving work early). The items are on a five-point scale, the same as for the OCB-C. The total score is a sum of the responses. The subscales range from relatively low to moderately high reliabilities of $\alpha = .42$ to $.81$ (Spector et al., 2006).

Social Support

Multidimensional Scale of Perceived Social Support. Items on this 12-item test are rated on a seven-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale measures perceived social support on three scales: friends, family, and significant other. The significant other subscale refers not necessarily to a romantic partner, but to a particularly special person (Zimet, Dahlem, Zimet, & Farley, 1988). It is psychometrically sound, with an internal reliability for $.83$ across the three scales (Nakigudde, Musisi, Ehnvall, Airaksinen, & Agren, 2009).

Attention

Due to the large number of items in the survey, we added ten attention checks to ensure that participants were paying attention as they completed the online survey. They were inserted randomly in the SEPI, WDQ, OCB-C, and CWB-C and were also on separate pages between scales. Several of them were based on attention checks recommended by Meade and Craig (2012). For example, one attention check in the SEPI was: "I am using a computer at this moment." We counted *strongly agree* and *agree* as correct answers for this item. In addition to these ten attention checks, at the end of the survey, participants were asked "In your honest opinion, should we use your data?"

Procedure

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Participants registered through mTurk as workers have access to a variety of human intelligence tasks (HITs) that are available for a pre-set amount of time and can be sorted by payment and other features of the HIT. We set up two HITs that were titled “Job, Relationships, and About You Survey.” Each HIT was limited to participants in the USA, workers with a HIT approval rate greater than 95%, and workers who have completed more than 100 HITS. The approval rate qualification was necessary to admit only participants who have had most of their HITS approved by requesters, indicating that the participant reliably performs quality tasks on mTurk. The HIT completion requirement ensured that participants cannot easily create new accounts to retake the survey and earn extra money. Participants who did not meet these qualifications were unable to view the HIT description that contains the link to the survey. First, we conducted a pilot study of 50 participants on mTurk, and after those were complete, reviewed the responses, and posted a 350 participant study. In the pilot study, the 10th attention check was not used.

The survey was administered through Qualtrics, an online survey design tool. Qualified participants accessed the online survey through a direct Qualtrics link on the HIT page after participants accepted the HIT. The first screen in the Qualtrics survey was a consent form. After reading it, participants elected to continue or terminate the study. Individuals who consented to participate were then presented with the demographic questions. Participants who indicated in these items that they worked outside of the U.S. or worked less than 35 hours per week were directed to a screen that indicated they could not participate in the study, and survey administration ceased for those individuals. Participants were asked to fill out job-related questions for the job at which they worked the most hours, and then the Test of Personal Intelligence (TOPI). Next, participants completed three sections in random order: the work

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section (Work Design Questionnaire, Organizational Citizenship Behavior Checklist, Counterproductive Work Behavior Checklist), self-report section (Multidimensional Scale of Perceived Social Support and Self-estimated Personal Intelligence scale), and vocabulary section (Modified Vocabulary Test and Wordsumplus). All items within the WDQ, OCB-C, CWB-C, MSPSS, and SEPI were randomized. At the end, participants completed the Backwards Digit Span test.

After completing the measures, participants were directed to a final screen, which produced a seven-digit random number that they entered into the mTurk page to validate survey completion. This ensured that participants could not attempt to submit their HIT for payment without completing the survey and allowed us to match up the participant to the Qualtrics data. Responses were then reviewed for acceptable completion: participants were compensated with seventy-five cents through mTurk if participants did not skip large survey sections and passed most attention checks in the survey.

All 400 slots in Amazon Mechanical Turk filled within a week. Qualtrics reported 444 completed surveys, indicating some participants were kicked out of the survey for not meeting its requirements or did not submit their survey to mTurk. Participants with large chunks of data missing (approximately 30 or more items) were removed, leaving the data from 398 participants. Participants who failed more than two attention checks were removed from the data, leaving 385 participants. Three participants replied *no* to the last question asking whether we should use their data or not, and four did not answer the question, so their data was removed, leaving 378 participants total with usable data.

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Results

Table 2 presents the means, standard deviations, and reliabilities for all measures used in this study. Table 3 shows the correlations between the ability-based and self-estimated PI measures and the other variables in the study.

Personal Intelligence

A six-item measure of objective personal intelligence (TOPI-6) was derived and used from the TOPI-12, because the whole scale had a relatively low reliability of $\alpha = .41$. The distribution of total scores ranged from 0 to 12, but 62.9% of the participants received scores of 11 and 12. Also, the TOPI-12 mean was higher than the reported means from other studies (Mayer et al, 2012c). The TOPI-6 and TOPI-12, in most cases, did not correlate with other variables significantly differently from each other, so due to its higher reliability, we used the TOPI-6 for the following analyses. The mean of the TOPI-6 was still high, as seen in Table 2, resulting in a highly negatively skewed distribution. The self-estimated personal intelligence scale (SEPI) does not correlate with the TOPI-6, $r(368) = .08$. However, one individual scale within the SEPI (self-understanding) correlates with the TOPI, $r(372) = .11, p = .028$. We used an alpha level of .05 for all statistical tests. For the rest of the study, TOPI refers to the TOPI-6 unless otherwise stated.

Work Characteristics

Our first hypothesis was that individuals with high PI report having more personally meaningful and satisfying jobs than those with low PI. We believed the correlations between PI and job satisfaction/perceived job significance would be positive, while the correlation between PI and intent to turnover would be negative. Table 3 shows that, contrary to our expectations, scores on the TOPI were inversely related to job satisfaction, $r(373) = -.13, p = .01$. There was no

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relationship between the TOPI and intent to turnover or task significance. However, the SEPI correlated significantly with job satisfaction, intent to turnover, and task significance in accordance with our predictions.

We also hypothesized that individuals with high PI would be more likely to exhibit the characteristics of leaders at their jobs than individuals with low PI. We examined the relations between the TOPI/SEPI and income, age, education, and how many employees a participant supervised at work. We also looked at the correlation between PI and autonomy, the complexity of the work, their simple/complex nature of problem-solving at one's job.

There was no relationship between the TOPI scores and yearly income but the SEPI was correlated with income, $r(371) = .18, p < .001$. There was no significant relationship between the TOPI and age. The SEPI also had no relationship with age. The TOPI did not relate to education, but the SEPI was positively correlated with education, $r(371) = .11, p = .035$.

Participants with high TOPI scores supervised fewer employees at work, contrary to our prediction; $r(378) = -.16, p = .002$. The SEPI did not relate to supervision. An independent samples *t*-test showed that people who supervised no one ($M=5.45$) had higher TOPI-6 scores than people who supervised one or more employees ($M=5.01$), $F(376) = 10.97, p = .001$. Another *t*-test showed no significant mean difference in SEPI scores between people who supervised no one and people who supervised employees.

The TOPI also did not relate to autonomy, task complexity, or problem-solving at work, as seen in Table 3, but high TOPI-12 scores were weakly associated with performing less simple tasks, $r(374) = -.12, p = .024$. Participants with high SEPI scores reported having greater task-related autonomy at work, more creative problem-solving tasks at work, and having less simple tasks at work.

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Individuals with high PI were hypothesized to be more likely to perform organizational behaviors and less likely to perform counterproductive behaviors at work than individuals with low PI. To test this, we found the correlations between PI and the Organizational Citizenship Behavior Checklist and the Counterproductive Work Behaviors Checklist. There was no significant correlation between the OCB-C and TOPI scores, but the SEPI was positively related to performance of organizational citizen behavior. The TOPI and SEPI were both negatively related to counterproductive work behavior, $r(361) = -.12, p = .007$; $r(356) = -.28, p < .001$. All subscales of the CWB-C were negatively related to the TOPI and the SEPI, except for the Production Deviation scale and the Withdrawal subscale, which was not related to the TOPI, as Table 3 shows.

Social Support and Relationships

High PI individuals were hypothesized to report having higher quality social and romantic relationships than those with low PI. We found a positive correlation between TOPI scores and reported social support in the Multidimensional Scale of Perceived Social Support, $r(376) = .13, p = .01$. The Significant Other and Friend subscale were significant, as seen in Table 3, but not the Family subscale. SEPI scores also positively related to MSPSS ($r(370) = .40, p < .001$) and all subscales.

We ranked the current personal relationship status of participants in order of commitment: single, in a casual relationship, in a committed relationship, engaged, and married. We found a marginal positive correlation between TOPI scores and commitment of relationship status, $r(377) = .10, p = .055$. The SEPI more strongly related to commitment of relationship status, $r(371) = .21, p < .001$.

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We also hypothesized that individuals with high PI would tend to work with more people and feel more connected to people at work than individuals with low PI. We examined the relationship between PI and the size of one's work team but found no significant relationship. Next, we examined the relationship between PI and the level of social support, initiated interdependence, received independence, and interaction outside one's organization at work. We found that both the TOPI and SEPI scores were positively related to perceived social support in the workplace, as seen in Table 3. The TOPI scores were positively related to received interdependence at work, although initiated interdependence and interaction outside the workplace were not significant. The SEPI scores were not related to initiated or received interdependence, but related to greater interaction outside the workplace. These four constructs in the WDQ were also combined to represent social characteristics of work, which overall correlated with both the TOPI and SEPI.

Personal Intelligence as an Intelligence

The final set of hypotheses involved PI's relation with other measures of general intelligence. First, we looked at the correlations between PI and measures of intelligence. The TOPI had a moderate correlation with the vocabulary scores on both vocabulary tests (the modified vocabulary test and the Wordsumplus), as seen in Table 3. It correlated with the Backwards Digit Span as well, $r(378) = .16, p = .002$. The SEPI did not correlate with the vocabulary scores, but contrary to predictions, correlated with the Backwards Digit Span ($r(372) = .11, p = .036$).

Next, we performed three multiple regressions analyses to examine the work domain and the relationships domain in relation to PI. We entered age, gender, and job satisfaction at the first stage, followed by the traditional intelligence measures at the second stage (the Backwards Digit

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Span and a composite vocabulary score), and finally the two PI measures at the third level (TOPI-6 and SEPI). We used a measure of PI that included both the TOPI and the SEPI, due to the low variability within the TOPI.

In the regression predicting scores on the CWB-C, we found that the variables in the first step of the analysis accounted for 5.5% of the variance in scores, the variables in the second stage accounted for 2.1% of the variance in scores, and the PI variables accounted for 3.7% ($R^2 = .11$, $F(7, 312) = 5.54$, $p = .002$). The TOPI did not significantly predict after the other variables have been taken into account, but the SEPI predicted CWB-C scores ($\beta = -.18$, $p = .002$) more than any other variable.

In the model predicting social support, PI (Step 3 of the analysis) accounted for 14.6% of the change in MSPSS scores ($R^2 = .21$, $F(7,319) = 11.8$, $p < .001$), even after controlling for demographics (5.1%) and traditional intelligence (.9%). The TOPI predicted MSPSS scores at a marginally significant level ($\beta = .10$, $p = .057$), while the SEPI predicted MSPSS scores more than any other variable in the model ($\beta = .38$, $p < .001$).

Using a similar regression model, PI accounts for the social variables in the Work Design Questionnaire. Social support, interaction outside work, and received/initiated interdependence were made into a single variable, and PI accounted for 4.1% of the change in social relationships at work after demographics (2.6%) and intelligence (.1%) were accounted for (total $R^2 = .15$, $F(7,326) = 7.50$, $p < .001$). The TOPI predicted social variables at a marginally significant level ($\beta = .10$, $p = .072$), and the SEPI predicted them significantly ($\beta = .18$, $p = .002$).

Finally, we performed a fourth regression analysis to see if PI accounts for job satisfaction. We found that gender and age accounted for 0.2% of the variance in job satisfaction scores, traditional intelligence accounted for 1.7% of the variance in scores, and the PI variables

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accounted 10.8% of the change in job satisfaction ($R^2 = .13$, $F(6, 327) = 7.8$, $p < .001$). TOPI predicted job satisfaction ($\beta = -.18$, $p = .001$), as well as the SEPI ($\beta = .30$, $p < .001$).

Discussion

The mini TOPI-12 did not display the expected reliability and participants found it easier than expected. While the TOPI can be used as a brief measure of objective PI, it was not as effective as we had hoped. We believe this may be because the college students used in previous studies of the TOPI-12 represented a different population than Amazon Mechanical Turk workers. The TOPI-12 may also simply have low content validity – the items of the TOPI-12 were taken from two sections of the full TOPI.

However, along with the SEPI, the TOPI could still be used to gauge PI's relationship with life outcomes. The SEPI predicted variables much better than the TOPI, but we suspect that results may have differed with a better measure of objective PI. The fact that the SEPI and TOPI do not correlate with each other (although may be nearing significance) indicates the theory that self-estimated PI and objective PI are different constructs. Overall, we found that the SEPI highly related to job satisfaction, social support, and performance of organizational behaviors at work, as predicted. It is particularly noteworthy that PI related to social support, social variables at work, job satisfaction, and counterproductive work behaviors above and beyond the effects of demographic variables and traditional measures of intelligence. This demonstrates the overall usefulness of PI as a concept, despite the fact that we had to use both the TOPI and the SEPI as a measure of PI. The SEPI showed no relation with verbal intelligence, as predicted, but is related to working memory, which was not predicted. PI for both measures is related strongly to social support and commitment of relationships, supporting the idea that PI is related to high

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relationship quality and ability to form close relationships. However, high TOPI scores related to low job satisfaction and lack of employee supervision, which was unexpected.

Work and Personal Intelligence

The study provided evidence that high PI was related to the absence of counterproductive work behaviors, both through the SEPI and the TOPI. High counterproductive work behavior is related to abusive supervision, anger, low levels of perceived organizational support, and job-related stressors, as well as personality and individual work situation (Spector et al. 2006; Shoss, Eisenberger, Restubog, & Zagenczyk, 2013). The TOPI was most strongly negatively related to the Sabotage subscale, which represents intentionally defacing or destroying one's employer's property. These types of behaviors are considered to be a form of displaced hostile aggression, more active than the behaviors in the Production Deviance scale but less direct than those in the Abuse subscale, which are relatively rare (Spector et al. 2006). Employees are more likely to express their anger through covert behaviors than through visible aggression that more easily leads to being fired. It was interesting that the SEPI was most strongly related to the Withdrawal subscale, but the TOPI was not related to it. This may be a factor of the limited TOPI distribution, or it may indicate that the two measures of PI measure different concepts. The Withdrawal subscale measures absence or lateness, which is related to attempts to avoid work or cope with stressful situations rather than to do direct harm to one's employer or coworkers (Spector et al., 2006). Withdrawal is related to boredom in the workplace as well, and there is less variance within its subscale. It is possible that there was not enough variance in the TOPI and in this subscale to pick up an effect. Another explanation is that objective PI is related to a lack of workplace aggression, while self-estimated PI is related to measures that reflect its correlation with job satisfaction – active positive feelings and desire to remain in the workplace.

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The TOPI did not account for CWB-C scores after other variables are taken into account, so this limits the extent of our conclusions, but this may differ with a more reliable TOPI.

Contrary to expectations, some evidence indicates that employees who go out of their way to help their organization are actually more likely to treat co-workers abusively (Fox et al., 2011). As such, it is difficult to interpret the TOPI's correlation with the CWB-C but not the OCB-C. Our study found that the OCB-C and CWB-C scales did not correlate with each other, but the CWB-C was related to low Backwards Digit Span scores. This indicates that perhaps the relationship between CWB-C and intelligence strengthens the CWB-C's relationship with the TOPI, whereas positive organizational behaviors are not affected by intelligence.

Job satisfaction, income, age, education, and supervision at work showed an interesting pattern of results. There was evidence that self-reported PI was related to high income, education, and job satisfaction, but that high objective PI was strongly related to supervising fewer employees and slightly related to low job satisfaction. We can conjecture that people who supervise many employees are less likely to interact with those employees on a daily basis. Thus, perhaps people with high PI are less interested in promotions and more interested in interacting with people closely. However, very few people reported supervising many employees, and very few people reported low TOPI scores, so this may have affected the results. Both the SEPI and the TOPI showed marginal relationships with age, which may turn out to be stronger with a full TOPI. This would support the idea that PI is a form of intelligence that is developed over the years.

The TOPI scores related slightly with lower job satisfaction. This contradicts our theory that an understanding of personality should allow people to better motivate oneself and select an occupation well-suited to themselves in the workplace. The low effectiveness of the TOPI-6

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scale is one explanation for why low job satisfaction is related to low performance on an objective test of understanding personality – for example, the TOPI-12 scale did not significantly correlate with job satisfaction. So this result could be a result of random error. Another explanation is that understanding of personality actually does relate to low job satisfaction, which can be explored in a later study. Perhaps satisfaction with one's relationships is related to low satisfaction with one's jobs. This implies a trade-off between performance in relationships and in the workplace. Or perhaps because understanding of personality relates to being psychologically minded (Mayer et al., 2012), participants with high PI are more likely to critically examine their career and where they want to be in their career, and find it wanting. This theory implies that if people in a typical working population (or at Amazon Mechanical Turk, which is often used for supplementary income) understand themselves well, they are likely to aspire to attain a different type of career. However, it may be that people with low job satisfaction tend to answer multiple choice tests more carefully for some reason. If understanding of personality does relate to low job satisfaction, we would have to investigate that mechanism in the future.

Relationships and Personal Intelligence

Our study provided stronger evidence that PI is related to relationships than workplace variables. The results were consistent with what we know about PI, particularly its relationship with emotional intelligence and agreeableness (Mayer et al., 2012a), but they goes beyond this to demonstrate that PI is related to forming strong relationships with others. It may be that understanding personality gives people the tools to form committed relationships, or that people in more committed relationships learn how to understand personality by being in those highly

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functional relationships. People who are married, for example, tend to be older than those who are single, so the effect of age may also lead to a better understanding of personality.

People with high PI find that they have more opportunities to meet and get to know people in their workplace and also find that people who they work with are friendly. This could be due to one's occupational choices or one's attitude towards other people, but those should be mediated by one's ability to understand personality. It was not surprising that high PI associated with dealing with people more effectively, due to what we know about PI (Mayer et al., 2012a; Mayer et al., 2010). PI was not related to the number of people in a work team, so it is possible that the number of co-workers one works with regularly is due to chance. Or perhaps PI is related to making the best out of relationships and getting the most out of them, that is, closeness of relationships, rather than desire to be in a greater number of relationships. The relationship between the TOPI and SEPI to the family subscale of the MSPSS (nearing significance for the former and the strongest relationship for the latter) supports this idea. People who understand personality well might be able to better identify people that they like and form relationships with them, while people who believe they understand people well may have come from supportive families. Further research could support this theory of the role of personality in relationships.

Received Interdependence at work was one of the only constructs that related with the TOPI and not the SEPI, making it noteworthy. Participants with high objective PI endorsed statements saying that their work is greatly dependent upon the work of other people. People with high PI may be more likely to notice how other people affect themselves, reflecting a more humble view of how they fit into the workplace. This interpretation is supported by the fact that PI relates negatively to narcissism (Mayer et al., 2012a). Whether the correlation reflects an opinion ("I rely on other people") or a workplace reality ("My position is such that I must rely on

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other people's decisions") is undetermined, but the latter position is consistent with the fact that people with high PI supervise less people and thus may literally rely more on management. In contrast, Initiated Interdependence, which was unrelated to both measures of PI, reflects a more independent opinion that other people depend on you. Self-aggrandizing viewpoints such as that probably bear no relation to PI.

Intelligence and Personal Intelligence

Because of the low reliability of the TOPI and its lack of score variability, we cannot make any definitive conclusions about the difference between objectively measured PI and self-estimated PI. The major difference between the TOPI and SEPI was the lack of relation between the SEPI and verbal intelligence. It was already known that the TOPI is correlated with measures of verbal intelligence (Mayer et al., 2012a),^bThe fact that both verbal intelligence measures were only correlated with the TOPI supports the idea that PI is a measure of intelligence. This idea is supported by the fact that people cannot accurately estimate their own intelligence (O'Connor, 2003). Our model did demonstrate that traditional intelligences did not account for much of the variance in job-related information and social support dimensions; although regression models with more data could show us what variables other than PI are useful for these predictions. These models demonstrated that PI affects counterproductive behavior, social relationships, and job satisfaction beyond the effects of intelligence.

This study provided new information by showing that, in a large sample of working adults, PI correlates with a proxy of nonverbal intelligence (Ostrosky-Solis & Lozano, 2006). The Backwards Digit Span is correlated ($r = .33, p = .02$) with the Standard Raven's Matrices, which is considered a good measure of general intelligence, and the BDS involves more visuospatial skill than language skill, (Banken, 1985), so we believe that the BDS was an

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appropriate proxy of intelligence in this study. However, it was unexpected that the SEPI would correlate with the BDS. Only one factor of the SEPI (self-understanding) separately relates to the BDS, so perhaps it is a question of motivation: participants with greater understanding of themselves may have found it more compatible with their worldviews to try harder to complete the BDS accurately. However, the fact that the BDS was not highly related to the SEPI compared to most other SEPI-related correlations supports the conceptualization of PI as an intelligence.

Strengths and Limitations of Study

As stated earlier, the mini TOPI's small distribution and low reliability limited our ability to separate the effects of objective PI and subjective PI. This limits the extent of conclusions we can make about the nature of PI and its correlates.

However, Mechanical Amazon Turk allowed us to collect a large sample of working adults with a wide range of ages, education, and income. This allowed us to be confident about the effects seen in the survey, particularly involving the SEPI. High quality data can be obtained from mTurk, even with low compensation, and its workers tend to be more representative of the American population than other online surveys (Buhrmester, Kwang, & Gosling, 2011). However, because we limited the study to full-time workers, our survey sample still may have been less diverse than expected. Many workplace studies are limited to studying people in one occupation, so the fact that our study showed multiple effects of PI indicates that PI operates on a general level. Our research is more applicable to the average person and worker than studies that use college students or focus on a specific occupation/workplace.

The use of mTurk was beneficial in many ways, but it also may have limited the accuracy of our data. It is possible that participants lied about working 35 hours or more per week to take the survey. The results would not be harmed if someone working, say, 25 hours per week took

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the survey, but the verifiability of the work-related questions would be compromised if significant numbers of unemployed people took the survey. Although the attention checks provided us with a reasonable method of removing participants who were not paying sufficient attention to the survey, the sole motivation of participants was payment, and it impossible to gauge whether a high level of attention was continued throughout the whole survey. Also, the translation of the Backwards Digit Span to an online format may have affected its validity. It is possible that participants could have written the numbers down as they were shown on screen, despite the instructions and their inability to gain from doing so.

Implications and Future Research

There is some evidence that PI is related to appropriate workplace behaviors and success. It is certain that people who believe that they have a good understanding of themselves and others enjoy their jobs, perform healthy behaviors at work, and tend to find their work complex and meaningful. They even tend to be more educated and earn more money, indicating how important self-estimated understanding of personality can be when it comes to achievement. However, it is not clear that objective ability to apply personality-related information relates to achievement or leadership ability. The relationship between job satisfaction and PI ought to be investigated further.

This study provides strong evidence that PI is related to healthy and supportive relationships. It is likely that people with high PI are better at putting themselves in good interpersonal situations, even at work, and also that they probably excel at treating others well and perceiving them in a positive light. PI allows one to recognize personality-related information in other people oneself, leading them to have the tools they need to cultivate strong relationships with others. This may lead to longevity and general positive psychological and

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social functioning. It also may lead to being able to be in more committed personal relationships. This study validates that understanding personality may be important for long-term health and overall demonstrates that understanding personality is adaptive.

The current study began to validate PI as an intelligence, but the full 134-item TOPI test should be used to further evaluate this preliminary research. We have some evidence that PI is not only a form of intelligence, but that it predicts beyond what intelligence can predict, making it a useful construct. In the future, we could see if the marginal relationship between the TOPI and age was supported. Use of a more rigorous visuospatial test to serve as a proxy of nonverbal intelligence, such as the Raven's Standard Progressive Matrices, would also contribute to our understanding of PI as an intelligence. Comparing the TOPI and SEPI more rigorously would also enable analysis of participants with a high TOPI but low SEPI, and vice versa. Although more research would greatly expand our current knowledge about PI, this study has demonstrated that PI has some relationship with important life outcomes, particularly with regard to relationships, but also in the workplace. Our understanding of personality can be seen as an ability that mediates our experiences, and PI contributes to our understanding of social and work behaviors above and beyond other variables, showing that this area of study is ripe for exploration. We may find in the future that our understanding of personality not only mediates our behavior at work, but contributes to our overall functioning in many areas of our lives.

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Table 1

Demographic Characteristics of the Sample

		%
Gender	Female	54.8
	Male	45.0
	Other	.3
Age (years)	18-25	20.4
	26-35	44.7
	36-45	17.2
	46-55	12.7
	56-64	5.0
Income (per year)	< \$14,999	5.8
	\$15,000-\$24,999	18.8
	\$25,000-\$39,999	27.3
	\$40,000-\$59,999	21.2
	\$60,000-\$79,999	13.0
	\$80,000-\$99,999	6.1
	\$100,000-\$149,999	5.6
	>\$150,000	2.1
Relationship Status	Married	40.2
	Single	28.7
	Living with partner	22.3
	Other	8.8
Education	Less than high school	.5
	High school graduate	5.3
	Some college	28.6
	Associate's Degree	10.1
	Bachelor's degree	39.0
	Master's degree	13.0
	Doctoral/Professional degree	3.4

Note. N = 378-376.

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Table 2

Mean, Standard Deviations, and Reliabilities of Primary Measures

Scales	Items	M	SD	α
Personal Intelligence				
Test of Personal Intelligence-6	6	5.27	1.14	.56
Self-Estimated Personal Intelligence	49	3.70	.50	.96
Traditional Intelligence				
Vocabulary Test	29	22.54	3.78	.78
Wordsumplus	14	10.66	2.40	.72
Backwards Digit Span	16	11.76	2.83	.83
Work Variables				
Job Satisfaction	3	5.27	1.47	.92
Intent to Turnover	1	3.35	2.15	–
Organizational Citizenship Behavior	20	57.91	14.05	.92
Counterproductive Work Behavior	32	41.10	9.11	.90
Abuse	17	21.24	5.05	.84
Production Deviance	3	3.84	1.40	.60
Sabotage	3	3.34	.92	.56
Theft	5	5.77	1.54	.74
Withdrawal	4	7.10	2.54	.77
Work Design Questionnaire				
Task Significance	4	3.68	.91	.85
Autonomy	3	3.84	.83	.83
Complexity	4	2.72	.90	.80
Problem Solving	4	3.52	.88	.77
Social Characteristics	16	3.70	.55	.82
Social Support	6	3.84	.66	.79
Initiated Interdependence	3	3.59	.86	.73
Received Interdependence	3	3.69	.84	.76
Interaction Outside	4	3.57	1.08	.89
Perceived Social Support				
Multidimensional Scale of Perceived	12	5.50	1.18	.93
Social Support				
Significant other	4	5.86	1.47	.97
Family	4	5.35	1.49	.93
Friend	4	5.29	1.34	.93

Note. N = 341-378.

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Table 3

Correlations between Personal Intelligence and Traditional Intelligence, Work Variables, and Perceived Social Support

Scales	TOPI-6	SEPI
Traditional Intelligence		
Vocabulary Test	.27**	-.04
Wordsumplus	.37**	-.07
Backwards Digit Span	.16*	.11 [†]
Work Variables		
Job Satisfaction	-.13 [†]	.30**
Intent to Turnover	.04	-.14*
Organizational Citizenship Behavior	-.04	.22**
Counterproductive Work Behavior	-.14*	-.28**
Abuse	-.16*	-.23**
Production Deviance	-.10	-.22**
Sabotage	-.23**	-.21**
Theft	-.15*	-.21**
Withdrawal	-.02	-.25**
Work Design Questionnaire		
Task Significance	-.01	.30**
Autonomy	.02	.26**
Complexity	-.07	-.21**
Problem Solving	-.02	.14*
Social Characteristics	.13 [†]	.30**
Social Support	.13 [†]	.30**
Initiated Interdependence	.01	.09
Received Interdependence	.11 [†]	.04
Interaction Outside	.05	.15*
Social Support		
Multidimensional Scale of Perceived Social Support	.13*	.40**
Significant other	.13 [†]	.32**
Family	.09	.35**
Friend	.12 [†]	.32**

Note. [†] = $p \leq .05$, two-tailed. * = $p \leq .01$, two-tailed. ** = $p \leq .001$, two-tailed. N = 336-378.