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## Personal Intelligence

Kateryna M. Sylaska<sup>1</sup>, Jayne L. Allen<sup>2</sup> and John D. Mayer<sup>2</sup>

<sup>1</sup>Department of Psychology, Reed College, Portland, OR, USA

<sup>2</sup>Department of Psychology, University of New Hampshire, Durham, NH, USA

### Definition

Personal intelligence has been defined as the capacity to reason about personalities, both one's own and others', and to use personality-based information to influence one's plans and actions (Mayer 2008, 2014). According to the model, personal intelligence involves four key areas of problem-solving:

- (a) to recognize personally relevant information from introspection and from observing oneself and others, (b) to form that information into accurate models of personality, (c) to guide one's choices by using personality information where relevant, and (d) to systematize one's goals, plans, and life stories for good outcomes. Mayer (2008, p. 215)

### Introduction

One way that people use personal intelligence is to predict one another's behaviors – such as how prompt a person will be. For example, when

Angela planned to carpool with her sister, Lindsay, to their parents' house Angela made sure that she was ready early. Angela knew that Lindsay frequently became upset if others were late and that Lindsay was already anxious about getting to their parents' house on time to help with a party. Angela was therefore ready and waiting for Lindsay, when her sister pulled up 12 min early to pick her up, and this helped promote a positive interaction with her sister for the rest of the ride.

People high in personal intelligence are able to collect information about others in order to make accurate predictions and guide their own and others' behavior and to use this information to integrate and systematize their plans across the lifespan (Mayer 2008). Other individuals are lower in personal intelligence and may fail to observe and use such personally relevant information; this may impede their ability to predict the needs and actions of the people they know. Another pair of sisters, for example, might fail to anticipate one another's behavior. One sister may be consistently surprised by her sister's extreme punctuality. The failure to anticipate such behavior is likely to increase how aggravating it seems. More generally, people who cannot predict others' behavior are likely to face greater frustration than others because they cannot understand the habits and dispositions of people.

Intelligences promote problem-solving in regard to important life skills; on that basis, evolutionary psychologists have speculated that intelligences evolved to promote survival and

reproduction of our distant ancestors (Flinn et al. 2005). Personal intelligence plausibly evolved with other intelligences such as spatial intelligence and verbal intelligence (Mayer 2009). For example, among our evolutionary ancestors, those who possessed a more accurate understanding of their own and others' abilities – in hunting prowess, fire-starting skills, and tracking predatory animals – would be more likely to survive through picking better hunting and gathering partners, as well as more generally in living with others in a community (e.g., Buss 1991; Dunbar 2003; Flinn et al. 2005).

## Personal Intelligence and Related Concepts

### Relevant Theoretical Bases

Personal intelligence may be viewed as related to several relevant, yet distinct, concepts: (a) psychological mindedness, (b) intrapersonal intelligence, (c) self-knowledge, and (d) the “good judge” of personality (Mayer 2009). We will discuss these four theoretical domains and where personal intelligence converges with and diverges from each.

**Psychological mindedness.** At the Menninger Clinic in the 1940s and 1950s, clinical researchers observed that some psychotherapy patients were better able than others to make connections among their inner thoughts and experiences, to learn about themselves through introspection and observation, and to improve through engagement with the psychotherapy process. They labeled those patients' skills as *psychological mindedness* (Applebaum 1973). The initial conceptualization of psychological mindedness converged clearly with the first key ability of personal intelligence: to identify personality information from introspection and by self- and other-observation (Mayer 2008). As the concept of psychological mindedness evolved, it moved from an ability-based approach to a self-reported interest in psychological processes, although exceptions do exist (e.g., see Hall 1992; McCallum and Piper 1997).

**Intrapersonal intelligences.** Gardner's (1983) conceptualization of multiple intelligence includes both intrapersonal and interpersonal intelligences (collectively referred to as “the personal intelligences”). Intrapersonal intelligence included (what we might now call) emotional intelligence, self-awareness, and development of a clear and unique self (Gardner 1983). Intrapersonal intelligence also reflects a person's ability to recognize personally meaningful information. However, the theory drew a tentative dichotomy between self-knowledge and understanding others' personalities; it also eschewed measurement research (Mayer 2008, 2009).

**Self-knowledge.** Self-knowledge represents what a person believes about themselves (Baumeister and Bushman 2008). Of the five aspects of self-knowledge that were described by Neisser (1988), the “conceptual self” – how individuals form cognitive models of their own self-concept based on their internal and social experiences – converges most closely with personal intelligence. Knowledge of one's conceptual self enables individuals to form models of their own personality. However, the accuracy of a person's self-perception is challenging to assess, placing practical constraints on test development in the area (Mayer et al. 2012).

**The “good judge” of personality.** The “good judge” of personality is someone who is able to judge others accurately (Estes 1938; Funder 1995; Taft 1955). These individuals are highly attuned in their perceptions of other people, judge others accurately, and are nondefensive themselves (Funder 1995). They extract personality-relevant information from their surroundings and connect behaviors to their associated personality traits (Akert and Panter 1988; Funder 1995). Both people who are high in personal intelligence and “good judges” should possess the ability to perceive cues in their environment and to respond correctly without defensiveness. Thus, the “good judge's” abilities are closely linked to recognizing personality-relevant information, but not necessarily with connecting observed personality characteristics to broader models of other people and without necessarily using the information they perceive to guide their choices or long-term goals.

Overall, personal intelligence is unique in its emphasis on understanding personality in general. Personal intelligence theory is centered on the idea that having accurate concepts of personality conveys an advantage in understanding oneself and others.

## Measuring Personal Intelligence

### The Test of Personal Intelligence (TOPI)

To explore the evidence for Mayer's (2008) theory of personal intelligence, Mayer et al. (2011, 2012) have created a measure of how well individuals are able to understand dimensions of personality and to engage in accurate problem-solving by using personality information. The *Test of Personal Intelligence* (TOPI) is divided into four problem-solving areas ranging from perceiving personality-relevant information to systematizing personal goals. Each area contains a number of multiple choice items. One such item, for example, reads:

- If a person is depressed and self-conscious, most likely, she also could be described as:
- calm and even-tempered
  - self-controlled
  - anxious and impulsive
  - fairly thick-skinned (Mayer, Caruso, & Panter, 2014)

The correct answers on the *Test of Personal Intelligence* are identified by referring to research in personality psychology. For example, Mayer et al. (2012) identified "c. anxious and impulsive" as the correct answer because research indicates relatively high correlations among traits of depression, self-consciousness, anxiety, and impulsiveness.

To understand whether personal intelligence exists, Mayer and colleagues (2012) administered initial versions of the *Test of Personal Intelligence* to several samples ranging in size from 241 to 385. Test-takers exhibited individual differences in each of the four areas of problem-solving hypothesized to be a part of personal intelligence, as reflected in Cronbach alpha reliabilities for each part from  $\alpha = 0.51$  to 0.84. To determine

whether personal intelligence was a unified area of problem solving – that is, exhibited characteristics of a broad intelligence – Mayer et al. (2012) next modeled responses to the test using *factor analysis*, a mathematical technique that is employed to determine how many mental abilities people draw on to solve the problems on a test. Using the four content areas of personal intelligence as indicator variables, Mayer and colleagues (2012) found that a "one factor model" – that is, a broad intelligence-like ability – was consistent with the data, supporting their prediction. Across samples, the overall TOPI exhibited a reliability of  $\alpha = 0.88$ –0.90 for the full scale.

The 2012-reported research, therefore, made the case that although personal intelligence can be divided into four areas of problem-solving, just one ability may be needed to reason in the area. Recent work suggests that personal intelligence may divide into two factors – strategic reasoning and adaptability (Mayer et al. 2014). The current version of the TOPI, version 1.4, is a 93-item test with two correlated factors (Mayer et al. 2014). Across multiple samples, the full scale TOPI 1.4 has demonstrated reliabilities in the range of  $\alpha = 0.86$ –0.92 for the full scale.

### Other Measures of Personal Intelligence

A shortened, 12-item version of the TOPI (TOPI-MINI-12) also is available for research use (Mayer et al. 2013). Mayer and colleagues have also explored other approaches to measuring personal intelligence including lifespan scales, coding biographical data (Mayer et al. 2010, 2012), and self-report scales. As with other intelligences, self-report and ability-based measures of the intelligence have correlations less than  $r = 0.20$  (Lortie 2015; Moore 2013).

## Additional Evidence for Personal Intelligence

### *Evidence of validity from relations to criteria.*

Across a series of three studies, Mayer and colleagues (2012) found that the TOPI's total scores were moderately and positively related to verbal

intelligence (as measured by a vocabulary test) and psychological mindedness ( $r_s = 0.39$  and  $0.38$ , respectively). The TOPI 1.4 has demonstrated similar moderate positive relations with the SAT Verbal, Math, and Total scores, and a measure of Spatial Intelligence (Mayer and Skimmyhorn 2017). In addition, the TOPI has small positive correlations with the Big Five traits of agreeableness, conscientiousness, and openness to experience with  $r_s$  ranging from 0.11 to 0.21.

The initial versions of the TOPI (versions 1.0, 1.1, and 1.2) also correlated ( $r_s = 0.51$ – $0.69$ ) with the *Reading the Mind in the Eyes* scale (a measure of how well participants are able to infer mental states by looking at the eyes of a photo; Baron-Cohen et al. 2001), and the Understanding and Management subscales of the *Mayer-Salovey-Caruso Emotional Intelligence Test* (Mayer et al. 2012). This is consistent with the generally high correlations among all broad intelligences. From a theoretical perspective, Mayer (2012) had predicted that higher personal intelligence would correlate positively with fewer symptoms of personality disorders – for example, correlating with fewer symptoms of grandiosity – and also correlating with fewer signs of the decision-making avoidance that is common among dependent personalities. Consistent with these predictions, Mayer and colleagues (2012) observed small to moderate negative relations between the TOPI and psychological grandiosity and narcissism, as well as a reduction in symptoms of dependent personality disorder ( $r_s = -0.16$  to  $-0.26$ ). Consistent with the independence of ability-based measures from self-report, the TOPI was unrelated to the subscales of the self-report-based Interpersonal Competency Questionnaire, with the exception of the providing emotional support subscale ( $r = .17$ ; Mayer et al. 2012).

Two studies have assessed how personal intelligence is related to academic outcomes. Drawing on data from West Point cadets, Mayer and Skimmyhorn (2017) found that the TOPI predicted academic GPA, assessments of performance on military tasks, and tactical officers' ratings of cadets' talents, but not the cadets' actual physical fitness/performance on physical tasks.

The TOPIs predictions appeared partly independent of those of the SAT: Even after controlling for total SAT scores, cadets higher in personal intelligence performed better in English courses, psychology courses, and other courses related to reasoning about people.

In a study of college students, Sylaska and Mayer (2017) tested whether students higher in personal intelligence were able to use the personally relevant information about themselves and others to successfully guide their choice of major. They found that students with higher levels of personal intelligence reported higher GPA, greater satisfaction with their education, and more engagement with their educational experience, compared to those lower in the ability.

The advantages of personal intelligence may extend to the workplace as well. Two studies have provided evidence that workers higher in ability-based personal intelligence engaged in fewer incidents of workplace sabotaging behavior (Lortie 2015; Moore 2013).

Viewed in concert, these studies support the utility of personal intelligence to predict attitudes and behavior in both educational and workplace contexts.

### Where Does Personal Intelligence Fit Among Other Intelligences?

Perhaps the dominant framework in intelligence research today, the Cattell-Horn-Carroll three-stratum model envisions intelligence as a hierarchical structure with three levels. The broadest conception of intelligence is at the top – general intelligence, or  $g$ . On the second level are broad intelligences – such as verbal intelligence and spatial intelligence. Finally, the specific components of those broad intelligences are at the third level – for example, vocabulary and verbal fluency are specific aspects of one's verbal abilities (McGrew 2009). Mayer (2015) hypothesized that personal intelligence represents one of the second-level broad intelligences.

Recently, researchers have concluded that emotional intelligence (another “hot” intelligence hypothesized as a second-level broad intelligence)

is indeed a broad intelligence (Mayer, Caruso, & Salovey, 2016). Given its psychometric qualities, personal intelligence seems likely to be classified as a broad intelligence as well. That said, testing this hypothesis will be time intensive and expensive: the test of emotional intelligence as a broad intelligence involved 8 h of time per participant for close to 900 participants (MacCann et al. 2014).

## Conclusion

### Summary

Personal intelligence is a broad intelligence that addresses people's ability to reason accurately about their own and others' personality and to use this information to guide their choices and achieve better outcomes (Mayer 2008, 2014). This construct carves out a unique space for understanding individual differences in this form of reasoning and is distinguished from other relevant psychological constructs such as psychological mindedness, intrapersonal intelligences and the "good judge" of personality (e.g., Mayer 2009). The Test of Personal Intelligence (TOPI 1.4) has shown promising evidence of validity through its test structure and relations to key theoretically proposed criteria. Research findings indicate that some of these relationships also are consequential: Personal intelligence may be related to academic performance, satisfaction, and engagement (Mayer and Skimmyhorn 2017; Sylaska and Mayer 2017) as well as workplace behavior (Lortie 2015; Moore 2013).

### The Future of Personal Intelligence Research

The study of personal intelligence raises intriguing new questions that had not really been possible to ask before. One of these is "How do people understand one another and human nature more generally – do they use just one ability or many? And if many, what is the best manner of dividing them?" Given the currently available measures for personal and emotional intelligences, it is now possible to ask how they are similar and different from one another. Is reasoning in one area the

same or substantially different from reasoning in another?

A still more general question is: "Given the diversity of human cultures, how much does the structure of personal understanding remain the same and how does it vary across different geographical regions?" Does personal intelligence enhance understanding across cultures – or is it a universal skill that is, however, honed to more local applications? And finally, at a personal level, the new intelligence suggests the question, "How is personal intelligence related to interpersonal functioning, and how does the ability develop and change across the life course?"

These questions are important because preliminary research indicates that the TOPI, for example, does indeed measure a construct distinct from other intelligences and that high scorers do exhibit benefits in reasoning and decision-making relative to those who are lower in the ability, including fewer personality disorder symptoms, stronger academic performance, and more desirable workplace behavior. It is also likely that people with higher personal intelligence contribute more generally to others, by helping to smooth relationships by appreciating others' individual differences (Mayer 2008).

## Cross-References

► [Emotional Intelligence](#)

## References

- Akert, R. M., & Panter, A. T. (1988). Extraversion and the ability to decode nonverbal communication. *Personality and Individual Differences, 9*, 965–972.
- Applebaum, S. A. (1973). Psychological-mindedness: Word, concept and essence. *The International Journal of Psychoanalysis, 54*, 35–46.
- Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Pumb, I. (2001). The "reading the mind in the eyes" test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, 42*, 241–251.
- Baumeister, R. F., & Bushman, B. J. (2008). *Social psychology and human nature*. Belmont: Thompson Wadsworth.

- Buss, D. M. (1991). Evolutionary personality psychology. *Annual Review of Psychology, 42*, 459–491.
- Dunbar, R. I. M. (2003). The social brain: Mind, language, and society in evolutionary perspective. *Annual Review of Anthropology, 32*, 163–181.
- Estes, S. G. (1938). Judging personality from expressive behavior. *Journal of Abnormal and Social Psychology, 33*, 217–236.
- Flinn, M. V., Geary, D. C., & Ward, C. V. (2005). Ecological dominance, social competition, and coalitional arms races: Why humans evolved extraordinary intelligence. *Evolution and Human Behavior, 26*, 10–46.
- Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review, 102*, 652–670.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Hall, J. A. (1992). Psychological mindedness: A conceptual model. *American Journal of Psychotherapy, 46*, 131–140.
- Lortie, B. (2015). *Personal intelligence in the workplace* (Honors thesis). Retrieved from the University of New Hampshire Scholars' Repository.
- MacCann, C., Joseph, D. L., Newman, D. A., & Roberts, R. D. (2014). Emotional intelligence is a second-stratum factor of intelligence: Evidence from hierarchical and bifactor models. *Emotion, 14*, 358–374.
- Mayer, J. D. (2008). Personal intelligence. *Imagination, Cognition, and Personality, 27*, 209–232.
- Mayer, J. D. (2009). Personal intelligence expressed: A theoretical analysis. *Review of General Psychology, 13*, 46–58.
- Mayer, J. D. (2014). *Personal intelligence: The power of personality and how it shapes our lives*. New York: Scientific American/Farrar, Strauss, & Giroux.
- Mayer, J. D. (2015). The power of personality. *The Psychologist, 28*, 296–299.
- Mayer, J. D., & Skimmyhorn, W. (2017). Personality attributes that predict cadet performance at West Point. *Journal of Research in Personality, 66*, 14–26.
- Mayer, J. D., Wilson, R., & Hazelwood, M. (2010). Personal intelligence expressed: A multiple case study of business leaders. *Imagination, Cognition, and Personality, 30*, 201–224.
- Mayer, J. D., Caruso, D. R., & Panter, A. T. (2011). *The Test of Personal Intelligence: Item booklet and scoring systems for various 1.0, 1.1, and 1.2*. Unpublished manuscript.
- Mayer, J. D., Panter, A. T., & Caruso, D. R. (2012). Does personal intelligence exist? Evidence from a new ability-based measure. *Journal of Personality Assessment, 94*, 124–140.
- Mayer, J. D., Panter, A. T., & Caruso, D. R. (2013). *Test of Personal Intelligence MINI Marker Scale-12 (TOPI-MINI-12) (2nd ed.): Brief manual, usage agreement, and item booklet*. Unpublished manuscript.
- Mayer, J. D., Caruso, D. R., & Panter, A. T. (2014). *Test of Personal Intelligence 1.4 (TOPI 1.4) manual*. Retrieved from: <http://www.unh.edu/personalitylab/lab-meas-proc/xintel-pers1.html>
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review, 8*, 290–300.
- McCallum, M., & Piper, W. E. (Eds.). (1997). *Psychological mindedness: A contemporary understanding*. Mahwah: Erlbaum.
- McGrew, K. S. (2009). CHC theory and the human cognitive abilities project: Standing on the shoulders of the giants of psychometric intelligence research. *Intelligence, 37*, 1–10.
- Moore, M. (2013). *Personal intelligence in the workplace and relationships* (Honors thesis). Retrieved from the Carolina Digital Repository.
- Neisser, U. (1988). Five kinds of self-knowledge. *Philosophical Psychology, 1*, 35–59.
- Sylaska, K. M., & Mayer, J. D. (2017, January). *Major decisions: Personal intelligence and students' reasoning about college majors*. Poster presented at the 18th annual meeting of the Society for Personality and Social Psychology, San Antonio, TX.
- Taft, R. (1955). The ability to judge people. *Psychological Bulletin, 52*, 1–23.