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A Rorschach inkblot test based occupational personality assessment method

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Abstract

Existing occupational personality assessments overwhelmingly depend on self-report instruments, rendering them susceptible to deliberate distortion driven by social-desirability pressures. Such response biases erode their validity in talent selection, leadership development, and career guidance, prompting human resource professionals to demand more reliable, objective alternatives. The Rorschach Inkblot Test (RIT), a classic projective technique, has recently re-emerged as a promising solution, having demonstrated an ability to attenuate social-desirability effects. Yet no systematic inquiry has examined whether the RIT can validly capture occupational-personality dimensions. This study addresses that gap through a mapping review that develops the RIT-based occupational personality assessment method by using the framework of Occupational Personality Profile (OPPro) and critically discusses the practical challenges of its real-world implementation.

Keywords: Rorschach inkblot test, social desirability effect, occupational personality, occupational personality profile, human resource

1. Introduction

The assessment of occupational personality has garnered widespread attention in corporate talent management practices. This growing interest is far from coincidental; rather, it stems from the method's capacity to systematically identify and quantify personality dimensions that possess significant predictive validity for job performance. Drawing upon well-established personality theories and assessment instruments, organizations can translate latent traits such as a candidate's problem-solving ability, emotional stability, or social initiative into comparable quantitative indicators during the selection process, thereby enhancing the accuracy of talent identification. In leadership development programs, the results of such assessments are utilized to design personalized development plans aimed at cultivating high-potential individuals by reinforcing core attributes aligned with strategic imperatives. In the context of career counseling, employees may leverage assessment feedback to recalibrate their career trajectories, thus mitigating turnover risks associated with person-job misfit. However, due to the inherently implicit nature of personality, all measurement efforts can only yield indirect observations external readings of the "black box." What occupational personality assessments capture is not personality per se, but rather an individual's behavioral tendencies that they are willing or able to express under specific situational conditions. This inside-out mapping is inevitably susceptible to interference from impression management, the social desirability effect, and momentary emotional states, all of which can amplify measurement error.

Consequently, human resource departments are compelled to weigh both cost and effectiveness when selecting and implementing assessment tools. On one hand, they must ensure that the validity and reliability of the assessments are sufficient to support decisions related to selection or promotion. On the other hand, they must also manage the direct and opportunity costs associated with lengthy administration times, complex data processing, or opaque reporting outcomes. Compared with alternative approaches such as situational judgment tests, structured interviews, or assessment centers, self-report questionnaires offer significantly greater technical maturity in terms of test administration (e.g., online completion, automated scoring), data analysis (e.g., instant reporting, normative benchmarking), and output generation (e.g., visualized reports, developmental

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recommendations). This ease of implementation and reduced marginal cost position self-report measures as the only current solution capable of achieving a “low-cost-high-efficiency” balance at scale within large organizations.

2. Overview of Occupational Personality Assessment

At present, there is no universally accepted definition of occupational personality within the academic community. Early human resource practitioners, when measuring personality traits relevant to job performance, did not specifically delineate which traits should be classified as occupational personality and which should not. As a result, common personality frameworks were often applied directly to talent assessment practices without further differentiation. Instruments such as the Big Five Personality Traits, the Sixteen Personality Factor Questionnaire (16PF), and Jungian Personality Types were frequently utilized in these contexts. This practice persists in many areas of human resource management to this day.

The origins of psychological and personnel measurement can be traced back to 1884, when British scientist Francis Galton conducted measurements of individuals’ physical and perceptual capabilities. Meanwhile, a systematic description of occupational capabilities can be found in Renwu Zhi (Treatise on the Assessment of People), a classical work by Liu Shao, a philosopher of China’s Three Kingdoms period. Whether from Galton’s empirical scientific measurements or Liu Shao’s philosophical systematization, both laid important foundations for future generations in the description and effective assessment of occupational competencies. In 1905, French psychologist Alfred Binet and his assistant Théodore Simon developed the world’s first intelligence scale, marking the beginning of modern psychological and personnel measurement techniques. Its significance lies not only in the initiation of systematic intelligence testing, but also in the establishment of a conceptual framework for quantitatively assessing implicit traits through observable behaviors. For a long time thereafter, this foundational idea gave rise to a wide array of psychometric instruments. To this day, it remains at the core of psychometric theory and technological development. Subsequently, with the emergence of various personality theories such as Swiss psychologist Carl Jung’s theory of psychological types, the Big Five Personality Theory proposed by American psychologists Paul Costa and Robert McCrae, and the Sixteen Personality Factor theory developed by Raymond Cattell numerous corresponding assessment tools were rapidly introduced. Against this backdrop, human resource professionals began to recognize the significant impact of personality traits on job performance. Consequently, they started to explore the use of personality assessment tools to evaluate individual personality profiles and to investigate their correlations with job outcomes. These early explorations provided valuable insights and experiential foundations for the subsequent development of occupational personality assessment systems.

In 1973, American psychologist David McClelland proposed the concept of competency, and illustrated the hierarchical structure of competency components through his Iceberg Model (Figure 1). This served as a milestone in the subsequent development of occupational personality

systems by: (1) systematically identifying competency factors associated with job performance; and (2) categorizing these factors into hierarchical layers, from implicit to explicit. According to the Iceberg Model of Competency, there are two categories of traits: surface-level explicit traits such as professional knowledge and operational skills, and submerged implicit traits including values, motivations, personality characteristics, and cognitive abilities comprising intelligence and self-awareness (McClelland, 1973) ^[17]. Among these, the implicit traits later became a critical reference point for constructing occupational personality systems (Budd, 1991) ^[3].

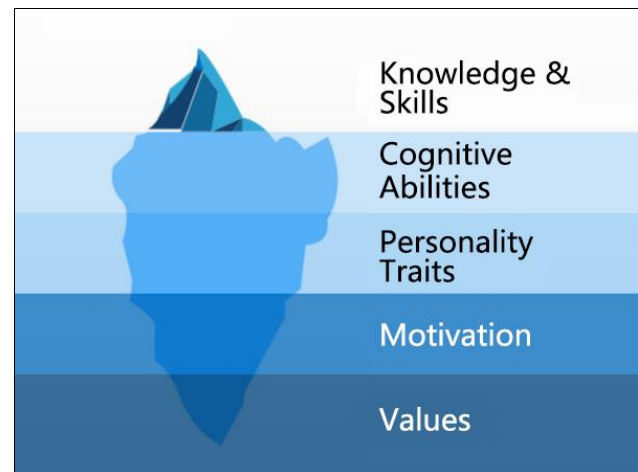


Fig 1: McClelland’s Iceberg Model of Competency

In 1991, Paltiel and Budd introduced the concept of the Occupational Personality Profile (OPPro), marking the first time that the term “occupational personality” entered the academic discourse (Tredoux, 2013) ^[26]. Within this framework, occupational personality is composed of nine distinct dimensions. Each dimension represents a driving factor that influences an individual’s potential behavior and communication style in the workplace. These nine dimensions were designed as bipolar trait pairs, including: Acceptance-Confidence, Detail-Flexibility, Skepticism-Trust, Emotionality-Detachment, Conservatism-Sociability, Sincerity-Persuasiveness, Composure-Argumentativeness, Optimism-Pessimism, and Idealism-Pragmatism (Budd, 1991) ^[3]. Collectively, these dimensions offer valuable insights into an individual’s suitability for various occupational roles from a personality-based perspective. Building on this framework, the two scholars developed a self-report OPPro scale to quantitatively assess individuals across these nine dimensions, as well as an additional dimension accounting for response distortion or bias (i.e., outcome validity). Through years of application, the OPPro scale has gained widespread acceptance and recognition in the market. At present, a large number of enterprises utilize the OPPro instrument for talent selection and leadership assessment. This marked the formal emergence of occupational personality assessment on the historical stage. Alongside OPPro, a series of self-report occupational personality inventories capable of cross-validation have also come into widespread corporate use. Together, these instruments constitute the most widely recognized suite of talent assessment tools today (Table 1).

Table 1: Mainstream Occupational Personality Assessment Instruments

Assessment Instrument	Method	Dimensions Assessed
DISC Behavioral Style Test	Self-report	Behavioral style, cognitive style
Hogan Assessment	Self-report	Strengths/potentials, work-related risks, values, motivations
Holland's Career Interest Inventory	Self-report	Work interests, values, behavioral style, cognitive style
MBTI Personality Assessment	Self-report	General personality
Professional Dyna-Metric Programs	Self-report	Behavioral style, cognitive style
Gallup StrengthsFinder	Self-report	Strengths and potential

Initially, these self-report occupational personality assessment tools required assessors to possess professional psychological expertise in order to interpret results and generate job-relevant recommendations. However, in an effort to lower the threshold for use, many of these tools were progressively simplified. This simplification has enabled respondents to easily infer the purpose of the assessments, leading to socially desirable responding the intentional manipulation of answers to guide outcomes in a favorable direction, a phenomenon known as the Social Desirability Effect. This issue has become increasingly prevalent in contemporary assessment practice, resulting in the diminishing commercial value of assessment outcomes. Consequently, human resource professionals are eager to find new and more robust solutions. An ideal methodology, in this context, should meet four essential criteria:

1. Eliminate social desirability bias.
2. Provide broad coverage of occupational personality traits.
3. Demonstrate strong validity.
4. Ensure high reliability.

3. Overview of the Rorschach Inkblot Test

In the early 20th century, Swiss psychiatrist Hermann Rorschach invented the Rorschach Inkblot Test (RIT), thereby initiating the development of projective testing techniques. Inspired by inkblot games and contemporary psychological theories, Rorschach developed the inkblot method as a means of assessing personality. Over the past century, RIT has become synonymous with projective testing and remains one of the most widely used personality assessment tools in clinical and forensic settings.

In a standard RIT procedure, examinees undergo two rounds of stimulus-based responses. In the first round, the examinee is presented sequentially with ten standardized cards, each containing a symmetrical inkblot image. For each card, the examinee is asked to report what they see or what the image evokes in their mind. During this phase, the examiner records the examinee's responses without interruption or probing. In the second round, the examiner reviews each of the examinee's initial responses in sequence and conducts follow-up inquiries. This phase requires the examinee to elaborate on the earlier responses, including identifying the specific location on the blot and the determinants that influenced the perception. The examiner documents the responses to these clarifying questions in detail. Most administrations of RIT conclude after these two rounds. However, in certain circumstances, a third round commonly referred to as the stress phase may be introduced when necessary. During this phase, the examinee is required to respond to specific prompts or demands within a limited timeframe, thereby eliciting additional information about their psychological responses. Upon completion of the administration, the examiner proceeds to code the previously recorded responses. Throughout the development of RIT, various coding and interpretive systems have been proposed. At present, most practitioners adopt the

Comprehensive System (CS), developed by American psychologist John E. Exner, as the standard framework for coding. After coding is completed, the examiner calculates a variety of indices according to the scoring rules. These indices reflect the examinee's functioning across various psychological domains such as affect, cognition, and perception. The indices are structured hierarchically into three levels: variables, subscales, and global scales. Variables refer to individual indicators derived from the examinee's responses for example, the "C" variable represents the total number of color-based responses given by the examinee. Subscales are composed of multiple such variables. In general, subscales can be interpreted independently to assess specific personality dimensions. For instance, the Perceptanalytic Executive Scale (PES) is an independent subscale composed of multiple variables, designed specifically for the selection of senior executives. Global scales, on the other hand, are composed of both variables and subscales. They enable the examiner to form an integrated assessment of the examinee's overall personality traits. In practical settings, global scales are the most commonly used interpretive reference. These three levels of interpretation variables, subscales, and global scales constitute the foundational structure of RIT's interpretation system. Examiners may select different combinations of indices depending on the specific objectives of the assessment, allowing for tailored evaluations of personality factors relevant to each case.

RIT is a remarkable invention. However, due to Rorschach's background as a psychiatrist, the method has historically been applied predominantly in clinical personality assessments. Later, as the importance of personality traits gained recognition in forensic settings, RIT was also adopted for evaluating the psychological state of criminal suspects. In the domain of occupational personality assessment, although a number of empirical studies have been conducted, there remains a scarcity of systematic exploration that can further guide the application of RIT in practical human resource settings. Therefore, in order to effectively promote the application of RIT in business practice, it is essential to first conduct a systematic review and synthesis of prior research. This foundational work will facilitate the development of an occupational personality assessment framework based on RIT.

4. Research Methodology

This study aims to synthesize existing empirical findings to develop an RIT-based occupational personality assessment method. For that, three prerequisite questions must first be answered: (1) Compared with self-report method, can RIT more effectively mitigate social-desirability effect? (2) On the basis of prior evidence, is the RIT suitable for assessing occupational personality, or has it already demonstrated explanatory power over occupational personality factors? (3) Does the RIT possess the reliability and validity required for commercial use, meeting or exceeding those of established self-report tools? Only after resolving these

three questions will we proceed to systematically map the RIT onto an occupational personality framework.

In building the method, this study employed a systematic mapping review (Grant & Booth, 2009) ^[10] to chart prior research on RIT in talent assessment and to map its variables onto the OPPro framework. A comprehensive literature search was conducted across Purdue Library, Lens, and APA PsycNet using five search strings: “Rorschach + human resource”, “Rorschach + talent”, “Rorschach + social desirability”, “Rorschach + job”, and “occupational personality”. After rigorous relevance and quality screening, 28 publications were retained for in-depth reading, analysis, and synthesis.

5. Previous Research on RIT in Occupational Personality Assessment

5.1 Resistance of RIT to Social Desirability Effects

Previous studies have shown that RIT, grounded in unstructured and purposeless inkblot stimuli, exhibits a superior ability to resist social desirability effects compared to self-report assessment tools. This advantage allows RIT to stand out among alternative evaluation approaches.

Fosberg (1943) ^[9] was the first to explore the anti-faking properties of RIT. His study involved 96 examinees unfamiliar with RIT, among whom 50 participated in a retest. The experiment was conducted in three phases: (1) administration of the test following the standard procedure, (2) participants were instructed to respond in a manner that would create the “best possible impression,” and (3) participants were then instructed to respond with the intention of leaving the “worst possible impression.” The results ultimately revealed that RIT possesses high test-retest reliability. Even when participants deliberately attempted to fake their responses, the test maintained a high level of reliability, with correlation coefficients ranging from .78 to .99. Moreover, examinees were largely unable to manipulate their scores meaningfully; attempts to falsify results had no substantial effect on the core coding variables, such as response content and form quality. Notably, even those participants with some background in psychology and a limited familiarity with RIT were still unable to fabricate responses effectively. This further supports the conclusion that RIT exhibits strong resistance to faking across the majority of test takers. Bornstein (1996) ^[1] conducted an empirical study comparing a self-report instrument the Interpersonal Dependency Inventory (IDI) with a projective measure the Rorschach Oral Dependency Scale (ROD). In the experiment, participants were divided into two groups, each receiving both the IDI and the ROD assessments. After completing the standard tests, both groups were asked to take a second test, this time under instructions to “appear as highly dependent as possible” or to “appear as highly independent as possible.” The results indicated that despite participants’ explicit intention to fake their responses, scores on the ROD showed no significant variation across testing sessions (with pre- and post-test score changes less than .10 SD), suggesting that the ROD demonstrates strong resistance to deliberate distortion. In contrast, scores on the IDI fluctuated markedly (with pre- and post-test changes exceeding .80 SD and falling below .60 SD, respectively), indicating that the IDI is substantially more vulnerable to faking than the ROD. Dewangan *et al.* (2015) ^[7] recruited 60 healthy university students and randomly assigned them into three groups (20 participants per group) to take RIT under role-playing instructions. The first group was instructed to respond as if they were a

“rapist-murderer,” the second as an “outstanding and intelligent student,” and the third as a “severely mentally ill patient.” All three groups were assessed across nine RIT indicators, and a 3×9 mixed-design analysis of variance (ANOVA) was conducted, along with the calculation of effect sizes (η^2). The analysis yielded F-values ranging from .03 to 1.38, with all p-values greater than .05. Furthermore, η^2 values ranged from .001 to .046, indicating that role instructions accounted for only 0.1% to 4.6% of the variance. This study provides robust evidence for RIT’s resistance to result falsification.

Taken together, the above three studies provide substantial support for the conclusion that RIT demonstrates superior resistance to social desirability effects compared to self-report assessment tools. This characteristic establishes a critical precondition for RIT to serve as a viable alternative to existing occupational personality assessment instruments that rely primarily on self-report methodologies.

5.2 The Correspondence between RIT and Occupational Personality Factors

With the increasing prevalence of RIT and its inherent advantages, it has demonstrated valuable and practically meaningful insights into individual assessment within the context of occupational personality (Qu & Shen *et al.*, 2014) ^[24]. Among occupationally relevant traits, more specific dimensions such as personality tendencies, behavioral styles, cognition and creativity, and emotional intelligence have evolved from generalized and unitary personality systems (e.g., the Big Five). According to existing literature, RIT has proven capable of assessing and interpreting most of the key dimensions of occupational personality in individuals.

Global Scale

Phelan (1962) ^[22] was one of the pioneers in exploring the application of RIT in occupational personality assessment. He argued that projective techniques like RIT can uncover an individual’s unconscious motivations, desires, and conflicts, which may in turn influence their behavior and decision-making within business environments. This laid the groundwork for the subsequent application of RIT in human resource management. Hackman and Wageman (2007) ^[12] later proposed that RIT is complementary to other leadership assessment approaches. By analyzing a leader’s responses to RIT, examiners can gain deep insights into the examinee’s latent leadership style, decision-making processes, and approaches to interpersonal relationships. This method offers a nuanced perspective for comprehensive leadership assessment. Del Giudice (2010) ^[6] highlighted the potential of RIT as a tool for talent evaluation in organizational settings. He argued that the method can reveal critical aspects of an individual’s personality traits, cognitive styles, and emotional responses factors that are essential for predicting adaptability, potential, and workplace performance. Specifically, analyzing how individuals respond to the RIT stimuli provides information about their approach to ambiguity and uncertainty, thereby offering valuable insights into their capacity for decision-making and innovation in complex business environments. De Carolis and Ferracuti (2005) ^[5] investigated the relationship between RIT and the Eysenck Personality Questionnaire (EPQ). Their findings revealed significant correlations between the two personality assessment approaches, providing indirect evidence that the psychological traits reflected in RIT are meaningfully

related to the personality characteristics that influence occupational performance.

Subscales

Piotrowski and Rock (1963) ^[23] developed the Perceptanalytic Executive Scale (PES), a subscale based on RIT, as an assessment tool for selecting senior management personnel. Their aim was to utilize RIT to evaluate candidates' leadership potential and managerial capabilities, thereby advancing its application in broader domains of talent assessment. Urist (1977) ^[27] designed the Mutuality of Autonomy Scale (MOA), also grounded in RIT, to assess individuals' perceptions of relationships with others in terms of autonomy, mutuality, and independence. This subscale primarily evaluates the extent to which test-takers demonstrate cognitive consistency in understanding their relationship with others specifically, whether they are able to recognize how they are perceived by others and comprehend the concept of mutuality. The study compared RIT-based assessment with two other methods: autobiographical writing and behavioral observation. The results showed high correlations among the three methods ($r = .53-.83$), supporting the subscale's validity. Meyer (2004) ^[20] identified the ROD as a content-based interpersonal dependency scale, designed to assess motives and needs that individuals are typically unwilling or unable to disclose in self-report assessments. Meta-analytic findings indicate that the ROD demonstrates strong inter-rater consistency, with a Kappa coefficient of .84 and an intraclass correlation coefficient (ICC) of .91. These results suggest that the subscale performs reliably across different respondents. Furthermore, research has shown that ROD is significantly associated with interpersonal relationships and interpersonal processes—both of which are considered critical to effective organizational functioning (Bornstein & Masling, 2005) ^[2].

Variables

DQ+ is a variable designed to reflect the respondent's perceptual accuracy and integrative quality in response to the inkblot stimuli. It represents the individual's capacity to process information and stimuli, as well as their cognitive ability to handle complex concepts and logical relationships (Exner, 2003) ^[8]. In addition, Exner introduced a z-score variable to code responses in which the respondent forms associations between different parts of the inkblot, utilizes the entire blot area, or integrates the white space with the inked regions. By summing these z-score responses, the Zf variable is derived. This variable is regarded as an indicator of intellectual utilization and the capacity to solve complex problems (Exner, 2003) ^[8]. Research further suggests that the Zf variable can predict overall intelligence levels in young respondents and has the potential to identify individuals with gifted traits, which holds significant implications for the selection of high-level knowledge-intensive talent.

The EA (Experience Actual) variable is composed of elements related to human movement and color responses. This variable reflects the emotional and cognitive resources an individual can mobilize when confronted with managerial challenges. In a longitudinal test-retest study spanning three years, the EA variable demonstrated strong stability ($r = .85$; Exner, 2003). Furthermore, the individual components that constitute this variable exhibited high inter-

rater reliability (Mayer *et al.*, 2002) ^[16], suggesting that the EA variable possesses generalizability and reliability across diverse populations. This variable plays a crucial role in evaluating an individual's integrated leadership capacity.

The COP (Cooperative Movement) variable refers to responses that involve two or more elements engaged in coordinated interaction for example, two individuals clapping hands in Plate II. Higher frequencies of COP responses are associated with expectations of cooperation in relationships. In both research and clinical settings, the COP variable has demonstrated good test-retest reliability ($r = .81$), with intraclass correlation coefficients (ICC) ranging from .77 to .91. These findings indicate that COP is both stable and valid. In the assessment of team collaboration capabilities, this variable effectively reveals individual candidates' willingness and disposition toward cooperative teamwork.

The X+% variable evaluates an individual's tendency to accurately interpret information in accordance with social norms. The X+% score has demonstrated a strong correlation in predicting selection success rates. For instance, it has outperformed various cognitive ability indicators in military training assessments (Hartmann *et al.*, 2003) ^[13]. When used alongside other cognitive scales, X+% offers valuable interpretive reference regarding an individual's social adaptability and cognitive functioning. Its high intraclass correlation coefficient (ICC = .88) indicates strong stability and reliability. This makes it a meaningful indicator in the selection of candidates for complex tasks.

Color responses (C variable) and movement responses (M variable) have been found to correlate with the extraversion dimension of the Eysenck Personality Questionnaire (EPQ), including variables such as M-WSumC, WSumC, and SumShd (De Carolis & Ferracuti, 2005) ^[5]. This finding suggests that these variables can be used to assess individuals' behavioral style tendencies, particularly extraversion. Extraverted individuals are generally characterized by high task responsiveness in the workplace. The C variable is associated with the assessment of emotional intelligence. It reflects an individual's emotional experience and expression (Steinert *et al.*, 2021) ^[25]. Studies have shown that in RIT, when the number of color (CF+C) responses exceeds that of form (FC) responses, it indicates a diminished capacity for cognitive control over emotional reactions. This serves as a useful measure of one's ability to regulate emotional responses rationally. The study also explored the relationship between the quantitative difference of color and form responses and cortical thickness in specific brain regions, providing empirical support for RIT as a valid instrument for assessing emotional regulation. The C variable plays a significant role in revealing an individual's comprehensive emotional intelligence in the workplace.

These findings suggest that RIT generally possesses assessment applicability across multiple occupational personality domains (see Table 2). However, most of these studies have focused on the suitability of RIT for assessing specific occupational personality traits. Occupational personality, by contrast, is a multidimensional and systematic framework. The lack of research addressing this comprehensive construct has hindered the practical application of RIT in business settings.

Table 2: Relationship between RIT and Occupational Personality Factors

Type	Name	Occupational Personality Dimensions
Global Index	/	Motivation, desire, internal conflict, leadership traits/styles, job performance, decision-making, interpersonal skills, cognitive style, and emotional response
Subscales	PES	Leadership potential and managerial competence
	MOA	Reciprocal cognition within self-object representations
	ROD	Interpersonal relations and processes
Variables	DQ +	Integrative perceptual and cognitive abilities
	Z	Intellectual capacity for solving complex problems
	EA	Emotional and cognitive resources
	COP	Cooperative interactions
	X + %	Social adaptation and cognition
	M-related	Cognitive and behavioral style / Introversion or Extraversion
	C-related	Emotional intelligence

5.3 Validity and Reliability of RIT

As a tool for personality assessment, the validity and reliability of RIT have long been subjects of scholarly debate. Due to the inherently subjective nature of its coding procedures and interpretive framework, the academic community holds divergent views on the extent to which RIT can yield valid and stable results. Nevertheless, current published research suggests that, when compared to other personality assessment instruments commonly used in business contexts, RIT demonstrates acceptable levels of validity and reliability.

A landmark meta-analysis conducted by Mihura *et al.* (2013) ^[21] found that, when assessing complex psychological constructs such as overall personality structure, perceptual accuracy, and performance-based testing RIT, utilizing the Exner Comprehensive System, achieved a validity coefficient (r) of approximately .70. This level of validity surpasses that of many widely adopted self-report instruments, such as the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) ($r = .3-.5$; Butcher *et al.*, 2010) ^[4], as well as certain neuropsychological assessment tools, including the Wechsler Adult Intelligence Scale (WAIS) ($r = .4-.6$; Lezak *et al.*, 2012) ^[15].

Viglione and Taylor (2003) ^[28] conducted an empirical investigation into the reliability of RIT based on the Comprehensive System. Their study analyzed 84 RIT protocols administered and scored by examiners from diverse professional backgrounds and assessed the inter-rater reliability (intraclass correlation coefficient, ICC) of 70 Rorschach variables. The findings indicated that the majority of these variables demonstrated “excellent” levels of reliability ($ICC > .80$). Based on these results, the authors concluded that RIT possesses strong scoring consistency as

well as valid and stable outcomes. This research is essential for the method’s application in organizational contexts, as only assessments with high reliability and stability can serve as credible references for predicting future job performance.

6. Systematic Mapping between RIT and OPPro

Although previous studies have revealed associations between RIT and various dimensions of occupational personality, from an applied perspective, there remains a lack of a systematic occupational personality framework that can be effectively integrated with RIT in practical settings. Nonetheless, prior empirical cross-validation studies examining the relationship between RIT and the Sixteen Personality Factor Questionnaire (16PF) offer a promising point of departure. Since most personality description frameworks including the Occupational Personality Profile (OPPro) have undergone cross-validation studies with the Sixteen Personality Factor Questionnaire (16PF), this enables us to use the 16PF as a conceptual bridge for mapping onto other comprehensive occupational personality models.

Among the numerous empirical studies comparing RIT and the 16PF, Greenwald’s research stands out for its comprehensiveness and serves as an important reference. He administered both the RIT and 16PF to a sample of 62 non-clinical participants. The study demonstrated that all dimensions of the 16PF could be meaningfully mapped onto corresponding variables of RIT (Greenwald, 1991; see Table 3) ^[11]. Another significant contribution of this study lies in its challenge to the conventional restriction of RIT being primarily applied to clinical populations, by empirically validating its applicability and effectiveness within a normative sample.

Table 3: Correspondence between 16PF Dimensions and RIT

16 Personality Factor	Meaning	Rorschach Inkblot Indicators (Correlation Coefficient)
FG	Faking Good Tendency	FC+ (.30*), FC (.36**), S (.27*)
FB	Faking Bad Tendency	P (-.26*), pass (.24#)
A	Warmth	T (.24*), 3r+2/R (.30#)
C	Emotional Stability	FC+ (.44***), X+% (.31*), 3r+2/r (.25*)
E	Dominance	FC (-.26*), Act (-.26*), pass (-.24#), R (-.24#)
F	Liveliness	MOR (-.29*), act (-.27*)
G	Rule-Consciousness	FC (.28*), FD (.30*), R (.25*)
H	Social Boldness	Adj. diff. (-.26*)
I	Sensitivity	S (-.24#)
L	Vigilance	FC+ (-.32*), T (-.25*)

M	Abstractedness	FC (-.27 [*]) , T (-.27 [*])
N	Privateness	CF+ (-.26 [*]) , T (.26 [*])
O	Apprehension	M (.28 [*]) , AG (.24 [#]) , act (.31 [*])
Q1	Openness to Change	P (-.24 [#]) , T (-.35 ^{***}) , act (-.34 ^{***}) , R (-.32 ^{***})
Q2	Self-Reliance	T (-.24 [#])
Q3	Perfectionism	Difference (-.26 [*]) , Adj. diff. (-.40 ^{**}) , FC+ (.28 [*]) , S (.24 [#]) , T (.33 ^{***}) , AG (-.36 ^{***})
Q4	Tension	EA (.27 [*]) , M+ (.32 [*]) , M (.40 ^{**}) , S (-.24 [#]) , AG (.30 [*]) , act (.39 ^{***})
FacI	Extraversion and Positive Affectivity	Adj. diff. (-.27 [*]) , MOR (-.28 [*])
FacII	Anxiety	M (.29 [*]) , FC+ (-.35 [*]) , AG (.28 [*])

Note: # P<.1, * p<.05, ** p<.01, *** p<.001

Source: Greenwald, D.F. (1991^[11]) Personality dimensions reflected by the Rorschach and 16PF. Journal of Clinical Psychology, 47: 708-715. <https://doi.org/10.1002/1097-4679> (199109) 47:5<708: AID-JCLP2270470513>3.0.CO;2

In the domain of occupational personality assessment, although Paltiel and Budd initially developed the Occupational Personality Profile (OPPro) individually (Tredoux, 2013) ^[26]. Concurrently, they conducted a direct empirical investigation into the mapping relationship

between the OPPro scales and the 16PF. The results ultimately revealed that all dimensions of the 16PF could be effectively mapped onto the various indicators of the OPPro (Budd, 2009; see Table 4) ^[29].

Table 4: Correspondence Between 16PF and OPPro

OPPro	R	Correlations Between 16PF and Each OPPro
Decisiveness	.68	Dominance (E) .57, Social Boldness (N) .31
Flexibility	.72	Expediency (G) .53, Sensitivity (I) .38, Abstractedness (M) .45, Openness to Change (Q1) .42, Flexibility (Q3) .53
Trust	.75	Trustfulness (L) .75
Stability	.77	Stability (C) .54, Dominance (E) .37, Social Boldness (N) .41, Practicality (I) .35, Self-Confidence (O) .60, Relaxation (Q4) .38, Impression Management (IM) .34
Gregariousness	.82	Warmth (A) .48, Stability (F) .43, Liveliness (F) .54, Forthrightness (N) .52, Team Orientation (Q2) .72, Relaxation (Q4) .37
Persuasiveness	.69	Dominance (E) .31, Liveliness (F) .36, Social Boldness (H) .55, Team Orientation (Q2) .30
Oppositionality	.49	Vigilance (L) .37, Tension (Q4) .22, Emotional Reactivity (C) .26
Pessimism	.57	Emotional Reactivity (C) .32, Vigilance (L) .40, Apprehension (O) .30, Tension (Q4) .34
Pragmatism	.77	Practicality (I) .67, Vigilance (L) .33, Concreteness (M) .48, Traditionalism (Q1) .42
Distortion	.71	Trustfulness (L) .32, Tension (Q4) .45, Impression Management (IM) .57

Note: The Impression Management (IM) dimension of the 16PF includes both FG (Faking Good tendency) and FB (Faking Bad tendency). Source: Budd, R. (2009) ^[29]. Occupational Personality Profile Technical Manual. Pulloxhill: Psytech International.

Based on the aforementioned mapping relationships, the 16PF can serve as an intermediary bridge to establish a connection between RIT and the OPPro (see Table 5). Although this mapping represents a qualitative association

rather than a direct indication of quantitative correlation or causality, it nonetheless offers important guidance for future research on OPPro-based assessment methods utilizing RIT.

Table 5: Correspondence Between Rorschach Inkblot Test Indicators and OPPro

Rorschach Inkblot Test Indices	OPPro									
	Decisiveness	Flexibility	Trust	Stability	Gregariousness	Persuasiveness	Oppositionality	Pessimism	Pragmatism	Distortion
Difference		√								
Adj. diff.		√				√				
EA				√	√		√	√		√
M+				√	√		√	√		√
M				√	√		√	√		√
FC+		√	√	√			√	√	√	√
FC	√	√		√		√			√	√
CF+	√			√				√		
S		√		√	√		√	√	√	√
P		√		√					√	√
X+%				√			√	√		
T	√	√	√	√	√	√	√	√	√	√
MOR					√	√		√		
AG		√		√	√		√	√		√
Act	√	√		√	√	√	√	√	√	√
pass	√			√		√				√
FD		√								
R	√	√		√		√			√	
3r+2/R				√	√		√	√		

This mapping lays a critical foundation for applying RIT within the OPPro framework for occupational personality assessment. When administered and interpreted through established systems such as Exner's Comprehensive System, RIT can be effectively deployed as an enterprise-level tool for assessing occupational personality, thereby overcoming the social-desirability effect inherent in self-report instruments and yielding more valid and actionable results.

7. Further Discussion

The traditional administration of RIT requires face-to-face interaction between the examiner and the examinee, which poses significant limitations for large-scale deployment in corporate management practice. To address this challenge, the systematic mapping work between RIT and OPPro makes the integration of emerging technologies a promising solution. With advancements in artificial intelligence and cloud computing, the application of RIT in talent development can be conducted in a fully digitalized format, encompassing administration, analysis, and presentation of results. In particular, the incorporation of Natural Language Processing (NLP), Generative Artificial Intelligence (GenAI), and Retrieval-Augmented Generation (RAG) technologies enables digital assessment systems to deliver accurate, efficient, and cost-effective solutions across multiple stages, including natural conversational interaction, interpretation of response content, stimulus-response encoding, real-time norm updates, and automated generation of assessment reports. As a result, RIT can be fully operationalized for occupational personality assessment in real-world business contexts.

In summary, the future application of RIT in occupational personality assessment requires concerted efforts in the following three areas:

First, attention should be directed toward the development of a more completely normative data specific to workplace populations. Such norms are essential for interpreting scores within the context of organizational settings (Exner, 2003). This endeavor necessitates the collection and analysis of data from a wide range of corporate environments, with the goal of constructing interpretive baselines for personality traits across gender, industry sectors, and cross-functional occupational roles.

Second, empirical research should be conducted to explore the relationship between RIT and the OPPro dimensional framework. This would lay the foundation for a more robust and reliable occupational personality assessment system based on RIT.

Third, digital and intelligent technologies should be employed to develop an occupational personality assessment system grounded in RIT. This will enable the large-scale application of RIT in a broader array of industries and enterprises.

8. Conclusion

In an era marked by the surging demand for occupational personality assessment, human resource professionals face growing pressure due to the limitations of traditional self-report methods, which are becoming increasingly inadequate for talent evaluation. A new assessment approach is urgently needed one capable of capturing a broader spectrum of occupational personality traits while minimizing distortion caused by the social desirability

effect. Owing to its projective methodology distinct from self-report approaches and its well-established validity and reliability in personality assessment, RIT holds considerable potential as an alternative assessment tool. This paper systematically reviews previous research on the application of RIT in occupational personality assessment, providing valuable reference and insights for practitioners seeking to apply it in practice.

Looking ahead, through broad and in-depth global dialogue among practitioners, the ultimate goal is to transform RIT into a "universal language" that transcends linguistic, cultural, and national boundaries. Meanwhile, the continued advancement of digital technologies and emerging tools suggests that this traditionally labor- and time-intensive assessment method may be increasingly deployed and implemented in more efficient digital formats. These developments may facilitate a seamless transition of RIT from its classical form toward expanded applications in future contexts.

Data availability statement

No new data were created or analysed in this study. Data sharing is not applicable to this article.

Ethics statement

This literature review and secondary analysis of anonymised archival data was conducted in accordance with the Declaration of Helsinki and the Purdue University IRB Policy on Research with Human Participants. Formal IRB review was not required because no new data were collected from living individuals.

Consent statement

All primary studies cited herein obtained written informed consent from their participants for the use of anonymised responses in scholarly publications. No additional consent was required for the present synthesis.

Conflict of interest statement

The author declares no competing financial, professional, or personal interests that could be construed as influencing the content or conclusions of this manuscript.

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