Scientific Journal "Newsletter on the results of scholarly work in sociology, criminology, philosophy and political science" | www.sci-result.de
ISSN (Print) 2699-9382 | ISSN (Online) 2699-9005
Volume 2, Issue 1, 54-63, Published: January 3, 2021
DOI: https://doi.org/10.61439/XECU6290

History of Psychological Thought. The Object of Research in Psychological Science

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Abstract

The evolution of psychological thought spans an extensive timeframe, witnessing diverse stages of development. Views regarding the subject of study in psychological science have transitioned from philosophical contemplations to more methodical and scientific approaches throughout the centuries. This article focuses on the inception of the most widely used tests in psychology, highlighting distinctions between psychological and philosophical sciences. The dynamic nature of psychology as a science is evident through its continual progression, introducing fresh research methods and topics as it advances.

Keywords
psychology, test, MMPI, Rorschach

Introduction

Often, there exists an inclination to blend the definitions of different fields of science and their goals. What constitutes psychology and how does it set itself apart from disciplines like philosophy? Delving into philosophical concepts necessitates the application of logical reasoning. The exploration of psychological concepts demands experimentation, trials, observations, and similar methodologies (Maul et al., 2016; see also Ashton, 2018; Brugha & Meltzer, 2017; Ellis, 2019; Putnick & Bornstein, 2016). In the context of psychology, though, the primary instrument continues to be the test, as it reveals the intricate psychological processes occurring within an individual that remain imperceptible to ordinary perception. Considering a wide range of contemporary issues and the role of psychology in their resolution, the topic of this article is highly relevant (Bögel & Upham, 2018; Bruce, 2014; Duffy et al., 2019; Johnson & Acabchuk, 2018; Lisciandra, 2018).

Psychology's foundation is rooted in testing; in its absence, psychology as a discipline, probably, would cease to exist. Thus, the concept of a «test» serves as a cornerstone and essential instrument in psychology. This represents the distinction between psychology and philosophy. While philosophy requires the utilization of a logical research framework, the realm of psychology necessitates an alternative research approach, involving experiments and tests, among others. As such, the concept of a «test» holds a fundamental role and serves as a crucial instrument within psychology.We find confirmation of this in the general discourse of current social-behavioral

research (Coulacoglou & Saklofske, 2017; see also Benson et al., 2019; Heller, 2019; Melikyan et al., 2019; Oishi et al., 2019; Reynolds & Livingston, 2019; Urbina, 2016). New tests, questionnaires and scales are constantly being developed (Lacroix et al., 2019; Levin et al., 2019).

This article will delve into an examination of the historical evolution and origins of testing, as well as the characteristics of widely employed tests that hold significant relevance in the global scientific community. Moreover, it will explore the contemporary issues surrounding the utilization of testing in connection to various research subjects and categories, shedding light on the stages of its application within the global context.

Methodology

Research methodology in psychology encompasses principles, approaches, and methods employed to collect, analyze, and interpret data, aiming to attain scientific knowledge about psychological processes and phenomena. The main research methods in psychology are as follows:

- Epistemology examines questions about knowledge acquisition and testing in psychology, essential for justifying research methods and assessing result validity.
- Ontology explores questions about the essence of phenomena and objects of study, aiding in determining the nature of various aspects of the human psyche.
- Experimental Research is conducted under controlled conditions to identify cause-and-effect relationships between variables, enabling more confident conclusions about potential causal relationships.
- Correlational Studies examine the degree of association between two or more variables, revealing statistically significant associations without allowing conclusions about causal relationships.
- Observational Studies involve direct observation of behavior, using structured or unstructured observations to obtain descriptive data.
- Clinical Research focuses on studying psychological disorders and the effectiveness of psychotherapy, utilizing observational, interview, and testing methods.
- Questionnaires and Surveys are standardized forms of questions designed to gather information about subjects' opinions, beliefs, or experiences.
- Experimental Instruments are used to measure physiological, neurophysiological, or psychological variables, such as EEG (electroencephalogram) or MRI (magnetic resonance imaging).
- Observation entails systematic recording and documenting of behavior or phenomena in a natural environment.
- Descriptive Statistics are used to describe research data, including mean values, medians, standard deviations, and correlations.
- Inferential Statistics allow inferences about a general population based on sample data, including hypothesis tests, analysis of variance, and regression analysis.
- Meta-analysis systematically combines results from multiple studies to draw generalized conclusions.
- Adherence to Ethical Standards encompasses protecting the rights and welfare of research participants, ensuring confidentiality of data, and maintaining objectivity in reporting.
- Psychoanalytic conversation is employed to delve into unconscious processes and conflicts and serves therapeutic purposes.
- Cognitive distortions are utilized to pinpoint and analyze distorted thinking in patients.
- Neuropsychological methods: Neuroimaging employs technologies like MRI and PET to examine brain activity and structure during various cognitive tasks.
- Electroencephalography (EEG) records the electrical activity of the brain, facilitating the study of electrical changes in response to various stimuli.
- Experiments in Virtual Environments: Virtual Reality (VR) enables the creation of

controlled environments for studying behavior and emotional responses to sensory perceptions.
- Text methods and content analysis: Content analysis of text is employed to systematically analyze text content, identifying patterns, themes, and meanings.

These methods offer various approaches to investigate different aspects of psychology, and the choice of a particular method depends on research objectives, available resources, and ethical considerations. Research methodology in psychology continually evolves, incorporating new technologies, statistical methods, and approaches to data analysis. Successful research necessitates careful planning, transparent methodology, and ethical consideration.

Successful research requires meticulous planning, a systematic approach, and unwavering adherence to scientific principles. Here are key elements contributing to successful research in psychology:

1. Clearly articulated research objectives.
2. Comprehensive review of existing literature in the chosen research area.
3. Selection of an appropriate research method.
4. Formulation and testing of hypotheses reflecting expected results.
5. Determination of the sample and data collection methods, including the development of a research protocol with controls for variables and the design of experiment or observation procedures.
6. Ethical consideration: Obtain informed consent from study participants by explaining the aims, procedures, and potential risks. Ensure data confidentiality and protect participants' rights.
7. Systematic data collection and analysis: Collect data according to the developed protocol and employ appropriate statistical methods for analysis and hypothesis testing.
8. Interpretation of results: Formulate conclusions based on data and hypothesis testing. Analyze the practical significance of results and their relevance to existing theories and research.

Following these steps and paying meticulous attention to each stage of the research process contributes to the success of a study in psychology.

Results

The term «psychodiagnosis» was first introduced in 1921 by Hermann Rorschach (1921), who coined it in reference to the process of assessment utilizing the «inkblot test» he devised, later recognized as the **Rorschach test**.

In the ensuing years, the term 'psychodiagnostics' began to be used as a synonym for 'psychological testing,' gradually supplanting its usage. It's worth noting that the concept of «psychodiagnostics» emerged subsequent to the development of the projective approach, which facilitated the comprehension of a comprehensive personality profile and other individual functions. During this era, substantial theories within the projective approach, formulated by diverse psychoanalysts, started gaining prominence. For a considerable duration, the notion of «psychodiagnostics» remained intertwined with projective tests, prominently employed by German and Swiss psychologists. As a result, Germany is regarded as the birthplace of testing, while the United States of America also witnessed significant progress in this psychological domain until the 1970s. During World War II, driven by the pursuit of better opportunities, numerous individuals from Europe sought refuge in the United States, contributing productively to the field. Consequently, this period witnessed a proliferation of historical studies concerning psychological testing.

In terms of the origin and introduction timeline of tests, various interconnected concepts emerge, as testing finds application beyond the realm of psychology. In classical historical accounts, the credit for the initial application of the term «test» is often attributed to **Francis Galton**, an English researcher and the founder of differential psychology and psychometrics (Yaroshevsky, 1996). As early as 1693, a test was devised for the purpose of selecting carriage drivers for streetcars.

We would be accurate in asserting that the origins of testing trace back to Europe, particularly Germany and Switzerland. It was within these regions that a majority of the renowned tests and enduring psychological concepts originated, still serving a meaningful purpose today.

The inaugural recognized test, as previously mentioned, was crafted by Swiss psychiatrist and psychologist Hermann Rorschach in 1921. This test, utilized for scrutinizing personality, psyche, and potential disorders, has withstood the test of time. Certain psychologists employ it to discern an individual's personality traits. The test is administered through an examination of the subject's responses to designated «blots» or Rorschach inkblots (Rorschach, 1921).

The subsequent test to emerge was the **MMPI,** formulated in the late 1930s to early 1940s at the University of Minnesota by Starke Hathaway and John McKinley (1921). This test adopts the structure of a personality questionnaire, rendering it user-friendly. Consequently, it finds extensive application in the analysis of individual traits and mental states, serving as a valuable psychodiagnostic tool within clinical practice.

In 1935, the realm of psychology welcomed the introduction of the **TAT test** - Thematic Apperception Test. This innovation was conceived at Harvard by Henry Murray and Christiana Morgan. The TAT test serves as a probing tool into the impelling driving forces of personality, internal conflicts, drives, interests, and motives of an individual.

Henry Murray (1943) personally delineates the TAT, as follows: The Thematic Apperception Test, better known as the TAT, is a method by which the dominant drives, emotions, attitudes, complexes, and conflicts of the personality can be identified and which helps to determine the level of latent tendencies that the subject or patient conceals or is unable to show due to their unconsciousness.

The **Sixteen Personality Factor Questionnaire** (**16PF**), commonly known as the Cattell Test, was co-developed by Raymond Cattell (1957), along with Maurice Tatsuoka and Herbert Eber. This assessment tool has gained widespread usage in personnel selection across universities, corporations, and government agencies.

The subsequent year ushered in the emergence of new tests: **the Frieling test and the Szondi test**. German psychoanalyst Heinrich Frieling (1968) employed his test to delve into an individual's inner aspirations, the bounds and vistas of the unconscious, and the nuances of perceiving the surrounding world, employing the «Color Mirror» methodology. Despite encountering substantial critique, this test remains employed for swift evaluations of mental state, vocational guidance, personnel management, analysis of personal attributes and aptitudes, and more.

The **Szondi test,** devised by psychiatrist and psychoanalyst Leopold Szondi, serves as a projective personality assessment using portrait selections. Its primary aim is to explore an individual's drives and unveil potential mental anomalies. Szondi introduced the psychological category of fate, positing that eight drives coalesce to shape the outcomes in an individual's life, thus shaping their fate (Szondi, 1956).

Starting from 1949, experts embraced the **Luscher color test** as a projective technique for personality analysis, initially pioneered by **Max Luscher (1971)**. This test shares certain resemblances with the Freeling test. Luscher maintained that human perception of colors is objective, while color preferences and choices remain subjective. Consequently, he gauged a person's subjective stance towards specific colors, thereby crafting the sole authentic test incorporating the precise hues and intensity of colors required.

Following that, the **Fundamental Interpersonal Relations Orientation Test,** also referred to as «Fundamental Interpersonal Relations Orientation,» made its appearance. In 1958, this framework was introduced by the American psychologist **William Schutz** (1989). This assessment tool facilitates the identification of unique behavioral patterns exhibited by an individual and their interactions with others across diverse domains. Human behavior is categorized with respect to three dimensions: inclusion (I), control (C), and affect (A), each encompassing six scales. Employing these attributes, it becomes possible to construct a comprehensive interpersonal profile of the individual in question.

In 1962, the subsequent projective technique introduced was **Edwin E. Wagner's Hand Test.** This test employs ten distinct 3.5x4.5 inch cards, nine of which feature uncomplicated line

drawings of individual hands, and the tenth card remains blank, intending to measure how the viewer perceives the actions of each hand (the blank card is left to the viewer's imagination). The observer offers verbal responses or «projections,» which are subsequently documented, evaluated, and analyzed. Wagner presented the Hand Test as a «starting point» or a «narrow-band» tool that may not encompass all major facets of personality, but rather assesses an individual's behavioral inclinations (Wagner, 1983).

In 1970, drawing from the theory of «accentuated personalities,» which proposes that each individual possesses inherent traits and characteristics that are initially viewed as pathological but can manifest positively or negatively under specific circumstances, the **Leonhard-Shmishek questionnaire** was devised. This test aims to diagnose the specific type of personality accentuation. Leonhard delineated ten distinct accentuation types, suggesting they represent a sort of «sharpening» of an individual's inherent traits, dividing them into character and temperament accentuations. Consequently, the primary purpose of utilizing this tool is to discern the accentuated character and temperament traits of an individual (Leonhard, 1976).

The subsequent test was formulated by **Martin Achtnich (1978)**, a Swiss psychologist and educator who studied under Leopold Szondi. Adept in the realms of career counseling, occupational disorders, clinical psychology, and depth psychology, Achtnich crafted the «Test of Photos of Professions (BBT–Berufsbilder test)» - a photographic assessment tool for vocational guidance. This test gained substantial traction in Switzerland and various European nations during the mid-1980s. The foundation of the test draws from the association technique pioneered by Austrian psychologist and psychoanalyst Sigmund Freud, centered around the selection of photographs as optimal stimulus material (Achtnich, 1978).

In 2015, drawing on the principles of fate-psychology, which originated with Leopold Szondi, **PhD Oleg Maltsev introduced the Quadro-test**, a tool aimed at revealing an individual's life path and fate (Antonova, 2017). The testing procedure involves the selection of a stimulus material comprising 48 book covers, arranged and chosen in a specific manner. Participants are tasked with selecting eight covers they prefer, eight they dislike, and one portrait. This test serves to ascertain the most efficient route to attain an individual's highest potential, thereby establishing a tailored training regimen based on the individual's personality traits and potential. The test's development and successful application are attributed to the International Schicksalsanalyse Community Research Institute and the Memory Institute. To date, the test's outcomes have consistently demonstrated its effectiveness beyond doubt.

Discussion

The history of psychological thought is a specialized branch of psychology that delves into the evolution and development of ideas within the field of psychology over time. This methodology involves a thorough analysis of historical contexts, philosophical currents, scientific discoveries, and paradigms that have played a role in shaping psychological theories and concepts.

The object of study in psychological science encompasses a diverse array of aspects related to human mental functioning. This broad scope includes phenomena such as perception, attention, memory, thinking, feelings, motivation, behavior, personality, and various other dimensions of the psyche. The overarching goal of psychology is to comprehend, describe, explain, and predict these mental processes and behavioral patterns.

The history of psychological thought covers a long period of time and has gone through various stages of development. Views on the object of study in psychological science have undergone changes over the centuries, from philosophical reflections to more systematic and scientific approaches. Here is a brief overview of the key stages in the history of psychological thought and its objects of study:

1. Philosophical period: This stage is associated with the studies of ancient philosophers such as Aristotle (1984), who pondered the nature of the human mind.

2. Behavioral Revolution: Marked by the emergence of behavioral psychology, associated with figures like Ivan Pavlov (2001), John B. Watson (Watson & Rayner, 1920), and B. F. Skinner (1971). It emphasized the study of observable behavior and its learnability.
3. Modern Directions: Modern psychology encompasses various approaches such as neuropsychology, evolutionary psychology, and social psychology, continuously expanding the knowledge of its object of study.
4. Integrative approaches: In current research, there is a desire to integrate different approaches, including combining neuroscience with psychology to understand how neurophysiological processes influence mental phenomena.
5. Cultural and Psychological Ecology: With increased globalization, the impact of cultural factors on mental processes has become a pressing issue. Cultural and psychological ecology seeks to understand how sociocultural aspects shape psyche and behavior.
6. Health and Psychotherapy Research: Psychology actively engages in research on mental health, psychopathology, and psychotherapy techniques. Understanding various mental disorders and effective treatments is a crucial aspect of modern psychology.
7. Digital Age and Technology: The development of digital technology has opened new avenues for mental health research. The Internet, virtual reality, and research in artificial intelligence are providing fresh perspectives on understanding the human mind and behavior.
8. Carl Rogers (1961) and Humanistic Psychology: Carl Rogers significantly contributed to humanistic psychology by introducing the concept of self-actualization. He believed that the purpose of human beings is to strive for self-development and self-discovery, with psychotherapy focusing on supporting this process.
9. Abraham Maslow (1954) and the hierarchy of needs: Another key exponent of humanistic psychology is Abraham Maslow. He developed a hierarchy of needs—a pyramid where basic physiological needs form the base, and the highest levels include the needs for security, acceptance, self-esteem, and self-actualization.
10. Erik Erikson (1969) and the theory of personality development: Erik Erikson contributed to the study of personality development by proposing a theory of psychosocial development. He identified eight stages, each associated with certain conflicts that individuals must overcome to achieve health and harmony.
11. Daniel Goleman (2019) and Emotional Intelligence: In more recent times, Daniel Goleman proposed the concept of emotional intelligence, emphasizing the importance of understanding and managing one's emotions and empathy in social interactions.

These authors and concepts represent only a small part of the multifaceted world of psychology. Today, psychology continues to evolve, integrating new research methods, technologies, and cultural and social changes. The history of psychological thought demonstrates the constant development and change of paradigms in psychology, allowing for a better understanding of the human psyche and its functioning. The object of study in psychology remains the human being and their psyche, but with the development of scientific methods and the expansion of cultural contexts, this science is in constant evolution. Psychologists seek not only to understand how the human mind functions but also to apply this knowledge to improve the quality of life, develop effective teaching methods, prevent and treat mental disorders, and address various sociocultural problems.

The list of basic tests that have been most commonly used in psychological science includes the following:

- Rorschach test: Hermann Rorschach (1921).
- MMPI: Starke Hathaway and John McKinley (1921).
- TAT test: Henry Murray and Christiana Morgan (Murray, 1943).
- Sixteen Personality Factor Questionnaire: Raymond Cattell (1957).
- Frieling test: Heinrich Frieling (1968).
- Szondi test: Leopold Szondi (1956).
- Luscher color test: Max Luscher (1971).

- Fundamental Interpersonal Relations Orientation Test: William Schutz (1989).
- Hand Test: Edwin E. Wagner (1983).
- Leonhard-Shmishek questionnaire: Hans Schmishek and Karl Leonhard (1956).
- Test of Photos of Professions (BBT–Berufsbilder test): Martin Achtnich (1978).
- Quadro-Test: Oleg Maltsev (Antonova, 2017).

However, it's noteworthy that this list also reflects the divergence in interests and orientations within psychological science. An illustrative instance is the contrast between the Rorschach test and the MMPI. The former constitutes a projective test, whereas the latter embodies a psychometric assessment. The tensions and disputes surrounding these tests, often rooted in the rivalry between European and American schools, could potentially be attributed to the significant contributions of the MMPI's creators.

The MMPI test serves as a psychiatric assessment, grounded in the commonly posed queries by psychiatrists. It incorporates 12 distinct scales, yielding eventual numerical scores. The MMPI test has a»floating stencil of behavioral adequacy» and assesses the traits of behavioral adequacy within specific situations. Its administration is straightforward, and interpreting the outcomes is relatively uncomplicated - a designated key is employed to calculate and summarize the numerical results. The MMPI's straightforward nature has contributed to its widespread use, in contrast to the relatively limited utilization of the Rorschach test.

The Rorschach test serves as a remarkable tool for psychologists, offering profound insights into an individual's persona, psyche, potential disturbances, and even the underlying motivations for their actions. Generates a distinct, independent assessment that unveils extensive information about an individual and their psychological makeup. This test also lays the foundation for a distinct personality theory and projective environment. But, operating and interpreting this test proves to be a challenging task, demanding a specific level of expertise, profound comprehension of the intricacies of human psyche and memory. Consequently, due to its complexity, the utilization of the Rorschach test remains limited globally, with only a handful of specialists using it. Effective utilization of the Rorschach test demands a scientific background, involving adeptness in serious projective interpretation and a comprehensive grasp of not only psychodiagnostics, but also other relevant scientific disciplines.

In comparative analysis of these two tests, the MMPI comprises 12 sectors and scales, each serving as a discrete «thermometer» measuring one aspect. In contrast, the Rorschach test functions akin to a «meter,» metaphorically «immersed» into a person's memory to varying depths, revealing insights into what unfolds at different layers of memory. The data extracted from these memory «depths» is subsequently decoded.

In the context of the introduced psychological concepts, it's important to highlight not just the Rorschach test, which is underpinned by its distinct personality theory. Another concept of significant importance is Leopold Szondi's proposition of «Ego Analysis» (Szondi, 1956). Szondi's psychology revolves around eight drives, while Rorschach's psychology delves into relationships with eight figures. On the other hand, Frieling's psychology is founded on eight figures functioning as components of the prototypical unit, where the figure is replaced by mechanisms.

It is evident that the American school of psychology initially focused on assessing the level of adequacy in individuals, while the European school delved into the realm of «Ego Analysis" probing the depths of human personality. These represent two distinct paths of research and exploration. Herman Rorschach's work centered on studying personality and substance, delving into human experience Rorschach, whereas MMPI gauged adequacy. These two tests and their respective orientations are fundamentally divergent.

Conclusions

It is important to acknowledge that a multitude of researchers and scientists spanning the globe have contributed a variety of distinct tests to the field. Each individual scientist or psychoanalyst who has formulated the tests discussed in this article brings forth their unique categories, psy-

chological theories, and corresponding tests. Upon scrutinizing the evolution of psychological thinking, two prominent streams emerge - the European and American schools.

The European and American schools in experimental psychology exhibit distinctive features. Here are some key differences and commonalities:

The European school is often more theoretically oriented, paying attention to scrutinizing concepts and notions, and developing fundamental theories. It frequently maintains close ties with other areas of the humanities, such as philosophy, sociology, and linguistics. For example, Gustav Fechner (1864), a German scientist and one of the founders of psychophysics, integrated methods from both physics and psychology. This school places great emphasis on the careful description and classification of psychological phenomena, utilizing various research methods, including qualitative and quantitative approaches. Franz Brentano (2006), an Austrian psychologist, exemplifies this approach with his development of the concept of intensionalism and emphasis on descriptive psychology.

On the other hand, the American school is more oriented toward practical applications of psychology, emphasizing applied research methods to solve specific problems. B. F. Skinner (1971), an American psychologist in the field of behavioral psychology, is an example of this orientation, having developed the principles of operant conditioning. The American school is more focused on experimental methods and statistical analysis of data, seeking objective and repeatable results. John B. Watson (Watson & Rayner, 1920), an American psychologist known for his classical conditioned reflex experiment with «Little Albert,» exemplifies this emphasis.

The American school of psychology primarily directed its attention towards evaluating individuals' level of appropriateness, whereas the European school delved into the intricate domain of «Ego Analysis,» delving deep into human personality. Scientists and researchers must bear in mind that tests serve as fundamental instruments in psychological science. Yet, the selection of such tools demands careful consideration, prioritizing their inherent worth over mere ease of application.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

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