Psychological Thought
psyct.psychopen.eu | 2193-7281

Editorial

What Is the Next Small Big Thing in Psychology?

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Psychological Thought, 2017, Vol. 10(1), 1–6, doi:10.5964/psyct.v10i1.215
Published (VoR): 2017-04-28.
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Which will be the next ground-breaking challenge in psychology? You may have as many answers as people. Here I will propose a neglected issue, that I believe will become the next big trend not only for the scientific field of psychology, but also for education, business, and society.

Creativity Behind the Scenes?

There are numerous approaches regarding the concept of creativity starting back at the ancient times, and more specifically the term ‘creativity’ is argued to have originated in Western culture through ancient philosopher Plato and Christianity, as divine inspiration in humans (Boden, 1994; Runco & Albert, 2010). In the modern era (after 1950), creativity became noticed quite late by psychologists as a field of systematic research (Sternberg, 1999) that has remarkable importance for our everyday life as well as the future of humanity. Unfortunately, a main problem in the study-assessment of creativity was and is the plethora of theories, which were reflected from early on in the many different methods employed in measuring the psychological construct of creativity. This seems to have happened not only because of the lack of consensus regarding the creativity concept, but also due to the diversity of creative expressions in humans (Brown, 1989).

Creativity can take the form of creative performance (as demonstrated in musicians, dancers, etc.), as well as the form of creative production (as demonstrated mainly by scientists) (Subotnik, Olszewski-Kubilius, & Worrell, 2011). Additionally, creativity is considered to be a trait which follows normal distribution in the general population of the creative potential of an individual (Nicholls, 1972). This may refer to the innate ability that everyone has at varying, but specific degree to generate something useful and at the same time novel (Baas, Roskes, Sligte, Nijstad, & De Dreu, 2013; Eysenck, 1995; Sternberg & Lubart, 1999). Another approach focuses on creative achievements rather than personality and trait characteristics, and more specifically to the

actual realization of the hypothesized personal potential in the form of real-life accomplishments (such as scientific discoveries, writings etc.) (Carson, Peterson, & Higgins, 2005).

The cognitive approach of ‘creativity’ refers to the process(es) that combine information from different fields of knowledge, and which end up to the production of new and original ideas, insights, solutions, things, and products, which are useful, and appropriate (Giannouli, 2016), as defined in a specific socio-cultural context (Plucker, Beghetto, & Dow, 2004). Creativity may take the form of divergent thinking (Runco, 1993), and in this line, particular areas of human performance, such as art and writing, are claimed to be strongly linked to divergent thinking rather than other areas, such as science and music (Runco, 1986).

For creativity, the first most well-known cognitive theoretical approach considers it as a process which passes through several stages, such as 1. preparation, 2. incubation, 3.illumination, and 4.verification (Helmholtz, 1896; Poincaré, 1913; Wallas, 1926). This four-stage approach gives emphasis on the unconscious rather than the conscious steps of creativity, while non-cognitive dimensions, such as motivation, energy, and commitment are emphasized (Delcourt, 1993).

A later approach examines creativity as a two-distinct-phase Geneplore ('generate and explore') model, which supports: 1) a generative phase during which individuals construct mental representations-preinventive structures, and 2) an exploratory phase during which the aforementioned structures are used by the individuals to come up with ‘creative’ ideas (Finke, Ward, & Smith, 1992). Creative cognition involves processes of problem finding and production of divergent ideas (Runco & Nemiro, 1994), problem construction (Chand & Runco, 1993), and processes of retrieving stored knowledge at different levels of abstraction (Wickes & Ward, 2009), something that implies that although creative cognition is based on cognitive functions (such as attention, memory etc.), it requires additional consideration of variables-factors outside the purely cognitive realm (Wickes & Ward, 2009).

Another theoretical model called ‘Four C model of creativity’ discriminates creativity into 1) little-c (that is everyday creativity as expressed in every human in the form of everyday problem solving and/or other forms of relevant expression), 2) Big-C (that is creativity expressed by few people in a specific field in the form of rare eminent creative contributions), 3) mini-c (that is creativity inherent in the learning process in the form of dynamic and interpretative knowledge construction-novel and personally meaningful interpretation of experiences, actions and events), and 4) Pro-C (the developmental and effortful progression beyond little-c that represents professional-level expertise in any creative area) (Kaufman & Beghetto, 2009).

Based on the above and other less mentioned theories in cognitive science, a myth exists that creativity is too difficult to measure, while the most common current trend in the assessment of creativity are the divergent thinking tasks-tests (Giannouli, 2016). Although the creation of a creativity quotient (CQ), similar to the intelligence quotient (IQ) has not been accomplished yet, the psychometric approach with divergent thinking tests is claimed to estimate the potential for creative thought (Runco, 1993).

But which test of creative thinking is best today? The already in use tests of divergent thinking are relevant to creativity, but they do not guarantee actual creative achievement. They are also not equivalent as they are not necessarily highly inter-correlated, while some of them appear to be better than others at eliciting originality, a vital component of creativity (Runco, Abdulla, Paek, Al-Jasim, & Alsuwaidi, 2016).

Some of the most characteristic tests include the Torrance Tests of Creative Thinking, which focus on fluency, elaboration, and originality (Torrance, 1974), the alternate uses tasks, which ask the examinees to come up with creative uses for everyday objects (Kaufman, Plucker, & Baer, 2008), the Wallach-Kogan tests (Wallach & Kogan, 1965), and the Guilford's tests which examine thinking for original titles of stories, uncommon word associations, remote concept associations, remote concept consequences, and unusual uses for common everyday objects (Wilson, Guilford, & Christensen, 1953).

In creativity assessment, a qualitative approach beyond the quantitative 'creativity tests' adds that the focus should be on information that comes from self-ratings, such as the Creative Achievement Questionnaire that is a self-report regarding creative achievement across 10 domains of creativity (Carson et al., 2005), and also expert (third-person) raters who evaluate creative work, as outlined in the Consensual Assessment Technique through which a product/response of an individual is given the label 'creative' to the extent that a group of observers agrees that it is indeed 'creative' (Amabile, 1982). Additionally, information for the assessment of creativity can be given by peers, parents and teachers/colleagues, who can give more ecologically valid information when the assessment of an individual's creativity is necessary (Giannouli, 2016).

What Psychologists Will Have to Do?

'Follow your heart, but take your brain with you.'

-Alfred Adler

Systematic examinations in computerized cognitive-neuropsychological assessment is growing rapidly, and new test batteries are being designed with the wish to use that knowledge in fostering relevant e-based interventions (Bauer et al., 2012), but computerized assessment in the form of objective tests and questionnaires regarding creativity is still scarce (Hofer & Green, 1985; Kwon, 1996; Lau & Cheung, 2010), and virtual environment interventions aiming creativity are non-existent. At the same time, research in the field of creativity and its cognitive underpinnings is necessary as sufficient data concerning the psychometric properties of the existing tests are not well documented, especially in young children and elders coming from healthy and non-healthy populations in non-western civilizations.

A field of interest seems to be the examination of concurrent validity of e-tests and standard paper-and-pencil creativity tests. The existing data on this matter is still incomplete, and it should be emphasized that computerized test adaptations and the original paper-and-pencil creativity tests cannot be considered to be equivalent, as hidden parameters regarding different aspects (such as test instructions, stimuli presentation, and response methods) can affect test results by influencing the cognitive processes that creativity tests claim to measure, especially in the rapidly growing number of older adults worldwide (Wild, Howieson, Webbe, Seelye, & Kaye, 2008).

Coming back to the question 'What is the next small BIG thing?', I strongly believe that a revival in creativity assessment research across ages and cultures in the modern technology-driven world is the answer.

Funding

The author has no funding to report.

Competing Interests

Vaitsa Giannouli is an Editorial Board Member for Psychological Thought, but she has not edited this Editorial article.

Acknowledgments

The author has no support to report.

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