

## Revisiting the Systems Approach: Commentary on Glăveanu's Paper "The Psychology of Creativity: A Critical Reading"

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### ABSTRACT

In responding to Glăveanu's critical views on the psychology of creativity, this commentary summarizes seminal work that has been carried out on creativity since 1950s. It underscores the value of the systems approach and discusses key methodological issues related to this approach, including creativity assessment, the necessity for multi-level analyses, the bandwidth-fidelity-dilemma, the challenge of operationalizing creativity for empirical studies and the lack of communication across disciplines. It calls for more external support, cross-disciplinary and cross-cultural collaboration and the establishment of a more open, tolerant and creativity-conducive environment to encourage and unleash creativity in creativity research from creativity researchers.

It is alarming to hear that the psychology of creativity is a discipline in crisis. In reviewing what has been achieved since the foundation of the creativity field in 1950, however, I hold an optimistic view about the current status of the field. Nevertheless, I agree with Glăveanu that a critical reading which focuses specifically on what we *should do* and *should do better* is constructive and beneficial for the further development of the field. Therefore, my commentary focuses on two points: Firstly, I provide some evidence to support my optimistic view of the current creativity field by highlighting some extraordinary achievements in this area. Secondly, I focus on some key methodological issues that we need to solve in using the systems approach of creativity for future creativity studies.

My optimistic view of the field of creativity comes from my concentration on the seminal work that has been carried out about creativity. For the past decades the concept of creativity has been extended from the traditional over-emphasis on the Person to the inclusion of Process, Product and Press (4P's Model of Rhodes, 1961). Recent studies have further extended the 4P's to also include "Persuasion" (Simonton, 1995) and the discrimination of creative potential and creative performance as the two overarching directions for

creativity research and theory (Runco & Pagnani, 2008). Meanwhile, we are clearer that creativity exists at different levels ranging from the mini-c to the Big C (4C's Model of Creativity: Kaufman & Beghetto, 2009). Thanks to the contributions of researchers from different fields, we now know that some core personality traits are positively (such as intrinsic motivation, openness, and risk-taking) or negatively (such as egocentricity, absent-mindedness and argumentativeness) related to creativity (see Runco & Pagnani, 2008 for a review); we know that both positive and negative affect can have an effect on creativity (De Dreu, Baas & Nijstad, 2008; Friedman, Forster & Denzler, 2007); and we know that creativity can be fostered through well-designed creativity programs (Scott, Leritz, & Mumford, 2004). Due to the scope of this commentary, I have only mentioned some of the many advances in the field, but would particularly underscore the development of the systems approach, whose importance has won more and more consensus in the field of creativity (refer to Hennessey & Amabile, 2010 for a review). The systems approach is set in sound foundations in contrast to the mystical approaches to the study of creativity; and changes the focus of the research of creativity from a static, uni-faceted, and individual-focused direction to a more dynamic, multi-faceted, and systems-focused direction. In line with this systems approach, we have Simonton developing and applying ingenious historiometric methods to investigate creativity and its antecedents at the historical and macro-level (see Simonton, 2006 for a review) and Amabile grounding her Social Psychology of Creativity using psychometric methods at the contemporary and micro-level (see Amabile & Pillemer, 2012 for a review). Both approaches still have potential to grow further in the forthcoming years because of the accumulative development of the relevant theories and assessment techniques such as Amabile's Componential Theory of Creativity (Amabile, 1983), the Motivational Principle of Creativity (Amabile, 1996), and the Consensual Assessment of Creativity (Amabile, 1982).

While acclaiming the value and potential of the systems approach, I admit that the systems approach to creativity is an easier-said-than-done method. In applying such an approach there are challenges that creativity scholars need to face:

1. The first challenge is the assessment of creativity. The systems approach sets creativity in context, or in Glăveanu's words, "in the wild" (Glăveanu, 2014a, p. 19). Such an approach entails a dynamic and authentic assessment of creativity. How should creativity tests be designed in a real-world context, targeting real-world problems? How can we involve legitimate experts in the field in order to evaluate the creative products? Westmeyer (1998) cautioned that creativity is a socially defined concept that is reinterpreted by psychologists as if it were a construct that can be psychologically assessed. According

to him, it is the conceptual disunity of a socially defined, but psychologically assessed concept that causes difficulties in the assessment of creativity. To overcome this disunity, it is imperative that psychologists collaborate with experts in other fields in the design and implementation of creativity assessment methods and procedures.

2. The second challenge is the lack of sound measures for elucidating the “interaction” of the different system components. Moren (2009) pointed out that the core of the measurement in a systems approach is the interaction of the system components as opposed to isolated individuals. Such an approach demands more data and more complex multi-level analyses than the correlational approach. In addition, this approach should also address the interdependent nature of the components of the creativity system. To meet this challenge, creativity researchers should be open to more dynamic assessment methods such as dynamic modeling and game theory (Moren, 2009).

3. The third challenge is the bandwidth-fidelity-dilemma (Cronbach & Gleser, 1965) that a systematic approach might run into while assessing a broad variety of variables at the same time. In other words, the breadth of the study - the examination of a broad variety of individual and environmental variables within one study framework - can be at the cost of the depth of the investigation (Tang, 2010). The bandwidth-fidelity-dilemma is predominantly discussed in personality studies. It describes the dilemma that an increase in bandwidth (the amount of complexity of the information one tries to obtain within a given space of time) comes at the price of fidelity (accuracy, validity and reliability). At the same time, any shift toward greater fidelity reduces bandwidth. With creativity being even more complex than personality, such measurement dilemmas are quite likely to occur as well. Therefore, creativity researchers should be prepared to find ways to cope with the bandwidth-fidelity-dilemma.

4. The fourth challenge is communication between psychologists and creativity/innovation researchers from other disciplines. There is evidence that creativity and innovation are not necessarily understood and approached in the same way in different disciplines (Werner et al., 2011). Measures have been taken to promote communication and cooperation among creativity/innovation scholars across cultures and disciplines in recent years, such as EU-funded ERASMUS programs (e.g., EMCI Erasmus IP summer school 2013 and 2014). But such training initiatives are only at their initial stage. More work, particularly joint research efforts are still needed to draw the experiences of empirical and practical studies together.

5. The fifth change is the paradox of creativity as a complex phenomenon and the necessity of operationalization as the premise for conducting empirical studies. By opera-

tionalization, we purposefully simplify the phenomenon and by simplifying creativity, we are drifting away from the essence of this complex phenomenon instead of approaching it. My concern is: Does creativity as characterized in terms of originality and rarity lend itself readily to quantitative studies? Or does it make more sense to base quantitative studies on the results of phenomenological approaches such as case studies, observation, or archive analysis? I agree with Glăveanu that creativity scholars should build theories instead of just citing theories. However, theories cannot be built overnight. It takes time to pursue an inductive path in the research attempt to lay the ground for theories. Phenomenological approaches have the advantage of going deeper into complex phenomena such as creativity and, therefore, point to a promising direction in theory building. Hence, the field of creativity should be open to new voices and different approaches, including having more and various journals, where different theories and types of studies can find their place.

To sum up, the systems approach, though almost unanimously agreed to be the future of creativity research, is difficult to put into practice. The challenges mentioned above show that disjointed individual efforts are far from adequate for the implementation of such an approach. Complex in nature, this approach calls for more purposeful, systemic and synthetic investigations instead of random, unstructured and fragmented individual efforts. Recent years have witnessed the appearance of interesting cross-disciplinary collaborative research on group creativity (Polzer, Milton, & Swann, 2002), paradoxical frames and creative inspirations (Miron-Spektor, Gino, & Argote, 2011), and the dark side of creativity (Gino & Ariety, 2012). However, these interdisciplinary collaborations represent only a small portion of current creativity research. For better and sustainable development in the field of creativity, we need more political, institutional and financial support for the implementation of the systems approach. We need to establish cross-disciplinary and cross-cultural networks of creativity/innovation scholars to exchange ideas and promote collaborations. Furthermore, we need to establish a more open, tolerant and creativity-conducive environment to encourage and unleash creativity in creativity research from the creativity researchers.

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