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A comprehensive method for the measurement of everyday creativity *



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ABSTRACT

This paper introduces a multivariate and theoretically driven measurement scheme for everyday creativity. We start by briefly reviewing classical distinctions (e.g., creative person, process and product; potential and manifest creativity) and examining several instruments for the assessment of creativity. We then propose a measurement method that integrates these theoretical elements and psychometric traditions. This method includes several questionnaires (assessing aspects of personality, cognitive styles, creative interests, activities, and achievements) and creativity tasks (divergent thinking, insight, and "real-life" creativity tasks). The scoring method of these tasks rests both on classical indices (e.g., fluency) and on an innovative subjective scoring procedure. This procedure relies on a randomized, double-blind peer evaluation, where some participants rate the creativity of other participants, and allows for unprecedented levels of efficiency and practicality. Overall, results shows that our measurement scheme is psychometrically and theoretically sound. These results are discussed at a theoretical and methodological level, and avenues for future research are explored.

Creativity is a vast and complex topic; both its conceptualization and measurement raise important questions. In this paper, we focus on the challenges revolving around the measurement of everyday creativity. We start by delineating everyday creativity and reviewing classical distinctions in the field. We then move on to a review of the existing methods available for the measurement of everyday creativity. This review yields an in-depth assessment of these methods, in terms of conceptual focus, psychometrics properties, and practical advantages and drawbacks. We end the theoretical part of the paper by proposing a comprehensive and realistic measurement scheme. The empirical part provides evidence in favor of this method.

1. Circumscribing everyday creativity

A first important conceptual question concerns the levels of creativity. Historically, creativity researchers have typically distinguished between *small-c* or everyday creativity (creative hobbies, problem-solving in leisure or work activities) and *Big-C* or eminent creativity (high-level creativity with major impact on culture). Beghetto and Kaufman (2007), Kaufman & Beghetto (2009) have proposed a finer distinction in four levels: *mini-c*, which represents simple combinations of basic pieces of information, involved for instance in learning; *little-c* (or *small-c*), which is equivalent to everyday creativity; *Pro-C*, which refers to progression beyond little-c found in professional-level creative activities (e.g. typically art and science, but in any other domain as well); and *Big-C*, which is equivalent to eminent creativity (national- and international-level creativity). In this paper, we essentially focus on little-c and, to

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some extent, Pro-c.

Another important distinction is the one between creative potential and creative realization or achievement (e.g., Runco, 2013; Sternberg, Grigorenko, & Singer, 2004). Creative potential usually refers to the presence, in the individual, of various personality traits (e.g., openness) and aptitudes (e.g., divergent thinking) known to be relevant to creativity. The notion of creative realization or achievement refers to manifest, observable creativity, either in the form of a single product or as the overall creative output of a given person at a given point in time. Understanding how potential and realization are connected is virtually equivalent to understanding how people can move from mini-c to little-c to Pro-C to Big-C (see Kaufman & Beghetto, 2009). Although we will not go into much detail about such transformations in this paper, the instruments we propose encompass both creative potential and creative achievement.

Another essential distinction is the one between domains, for instance between art and science. In principle, such distinctions can be almost infinitely refined (e.g., visual arts, photography, landscape photography, etc.). The question of domain is also connected to another difficult one: is creativity domain-general or domain-specific? Although there is controversy over this issue (e.g., Plucker & Beghetto, 2004), creativity is probably both domain-general and domain-specific, possibly arranged in a hierarchy of micro domains nested in domains grouped within a general thematic area (Kaufman & Baer, 2005). Some traits and aptitudes are arguably general and relevant to any domains (e.g., openness), whereas others are more useful for certain domains only (e.g., extraversion for performance arts). It is also likely that for little-c, domain specificity is rather low, but it is extremely high for Big-C (Kaufman & Beghetto, 2009; Kaufman, Beghetto, Baer, & Ivcevic, 2010). Although this question of domain is peripheral to this paper, we share the view that several domains should be represented, in creativity tasks and/or in creativity questionnaires.

Finally, the distinction between the creative person, process, and product may be the most established one in creativity research (e.g., Rhodes, 1961; Runco, 2004; see also Gläveanu, 2013). The creative *person* refers to all individual variables potentially related to creativity, encompassing many cognitive abilities, personality traits or emotional states. The creative *process* refers to the dynamic progression of thoughts and actions that a person deploys in order to achieve a creative *product*, that is, the final, observable output. The fundamental person-process-product distinction is of particular interest to this paper, because a method claiming to assess creativity comprehensively should be able to assess, one way or another, several — or better yet, all — of these components. We return to this question when introducing our synthetic approach. Before that, let us review the available instruments allowing the assessment of various facets of everyday creativity.

2. Measures of everyday creativity

Historically, creativity has been approached through a very large number of methods. It is practical to arrange them in two main categories, namely, questionnaire-based and task-based methods. Each of the methods reviewed below is discussed with reference to the distinctions mentioned above.

2.1. Questionnaire-based measures

Questionnaire-based measures of creativity have long been used to assess several facets of creativity, from person to process to product. However, those questionnaires are chiefly used to measure three main sets of variables: (i) personality traits; (ii) thinking style and (iii) creative activities and achievements. Together, these tools can offer a good estimation of individual creativity, whether potential or manifest.

2.1.1. Personality inventories

Several personality factors can be seen as indirect indicators of creativity, allowing for a rough estimate of creative potential. Classically, these are factors from the Big 5 (e.g., openness; McCrae, 1987) or some other general model (e.g., Psychoticism; Eysenck, 1995), as well as more specific traits (e.g., novelty seeking; Schweizer, 2006) or heterogeneous adjective check lists combining a large variety of traits (e.g., Gough, 1979). This literature is vast and has a long history, and different lines of work in relatively recent past research allows for a synthesis (e.g., Fürst, Ghisletta, & Lubart, 2016; Fürst & Lubart, 2017). However, unless one has a specific interest in creativity and personality, a measure of openness is probably sufficient to cover this ground. There is indeed overwhelming evidence that openness is *the* personality factor related to creativity (Oleynick et al., 2017). Other personality factors are less consistently associated with creativity; they are relevant only for some specific facets, domains or levels of creativity (e.g., Batey & Furnham, 2006).

Openness/Intellect is a rich and complex personality factor. For this reason, and especially in the context of creativity research where it is so important, two main aspects of this factor can be distinguished: *openness* (encompassing even more specific facets such as interests in aesthetics, fantasy, imagination and reflection) and *intellect* (encompassing specific facets such as interest in truth and ideas, as well as intellectual engagement, quickness, and competence) (DeYoung, Quilty, & Peterson, 2007). Studies have shown that the intellect aspect is more closely related to intelligence and working memory, while openness is more closely related to schizotypy

¹ In addition to these three components, creativity researchers often consider a fourth one, the environment (e.g., various constraints, opportunities, and contextual

² We use the terminology and writing conventions proposed by DeYoung et al.: Openness/Intellect refers to the main factor, while the terms Openness and Intellect refers to the two aspects of the overall factor.

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