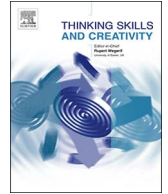




Contents lists available at ScienceDirect

Thinking Skills and Creativity

journal homepage: www.elsevier.com/locate/tsc

Educating which creativity?

Vlad Petre Glăveanu

Department of Psychology and Professional Counseling, Webster University Geneva, 15 Route de Collex, 1293 Bellevue, Switzerland



ARTICLE INFO

Keywords:

Creativity
Culture
Society
Assessment
Educating creativity

ABSTRACT

This paper explores the sociocultural construction of creativity and reflects on its implications for how we understand and educate creative potential. Drawing on a historical analysis of creativity and related concepts, such as genius and talent, from Antiquity onwards, I identify three prototypical ways of defining creativity. The first and most common one, continuing the legacy of the Renaissance and Romanticism, associates creativity with the arts and emphasizes self-expression, originality, and divergent thinking. The second one, related to the ideals of the Enlightenment, connects creativity with science and discovery and brings to the fore its functional, problem solving aspects. Last but not least, post-modernity advances new metaphors for creativity and invites us to rethink its everyday life dynamic. One of them is that of the craftsmen, ready to mix and match, to experiment and reflect on the role of tradition and habit in creativity. Each one of these paradigmatic positions – the artist, the inventor, and the craftsmen – propose different relations between creativity and society and have deep implications for how we discover and cultivate creativity in education and beyond.

1. Introduction

Creativity is largely considered today synonymous with success. It is the success enjoyed by creative people who are accomplished in both their personal and professional life; the success of innovative institutions capable of thriving in the complex and dynamic work environments of today; the success of countries that cultivate a healthy creative industries sector and invest in research and development. Why is this assumption so widespread? Because creativity is typically defined, at least in psychology, as the process leading to the generation of both new/original and useful/effective products (see [Runco & Jaeger, 2012](#)). These products don't necessarily have to take a material form, they can be ideas or performances, e.g., a dance or musical performance. The "level" of creative achievement can also vary. [Kaufman and Beghetto \(2009\)](#), for instance, famously distinguished between four types of creativity: mini-c (the creativity involved in learning and meaning-making), little-c (the creativity of mundane, everyday activities), Pro-C (the creativity involved in professional activities), and Big-C (the revolutionary creativity that transforms culture and society). In this model, creativity contributes to our individual and collective lives in different ways. It helps us learn and improvise in our daily interactions, it helps us innovate at work and, in some cases, generate products that get to be recognized by entire communities, nations, or at a global level. In each instance, creativity is seen as something good, something people have or can cultivate, something that generates progress. And yet, is this the only discourse we have about being creative?

Let's imagine asking teachers if they would like to have more creative students in their classroom. Most probably they would answer in the affirmative, even be enthusiastic about the prospect. And yet, if they were to think about what it would mean for every child in class to be highly creative, most would probably have second thoughts. What would it mean for the dynamic of the classroom if every student was ready to question what is presented and add their own contribution to it? Or if they started creatively re-

E-mail address: glaveanu@webster.ch.

<https://doi.org/10.1016/j.tsc.2017.11.006>

Received 14 August 2017; Received in revised form 31 October 2017; Accepted 9 November 2017

Available online 13 November 2017

1871-1871/ © 2017 Elsevier Ltd. All rights reserved.

negotiating class norms and playing with the roles of teacher and student? From the outside, that would look like a highly creative classroom interaction. From a teacher's perspective, it would be close to chaos in schools. In fact, previous research has shown that, when they get to choose between a "creative" and "good" student profile, teachers often choose the latter because the good student is more obedient (Karwowski, 2010). The same, I would argue, applies to organizations. While the general discourse is that creativity is required from top (leaders) to bottom (followers) in order to encourage innovation, at a practical level, most organizations are averse to change (Lahlou & Beaudouin, 2016). Indeed, they prefer conformist employees and playing by the rules instead of creating the instability that would surely follow from constant innovation.

So do we want or we fear creativity? A little of both, perhaps. More importantly though, we should ask *which creativity we are talking about*. Is it the evolutionary, adaptive type, that tries to improve things little by little? Or does it take the form of improvisation in responding to obstacles? Or perhaps it is a non-conformist type of creativity that deliberately defies the status quo? For all of these cases we can find advantages and disadvantages. Furthermore, we can notice that actually those people who want more creativity – in schools, at the workplace, in the family, and so on – might not be talking about the same thing. Despite the fact that we tend to operate in psychology with a single and unitary definition of creativity, as explained above, this definition is product focused and, as such, it remains silent about the antecedents, processes, and consequences of creativity. And this is how, in reality, there might be different "creativities" rather than a singular, unitary one (Sternberg, 2005). There is ample evidence today that the creative process is largely domain-specific, meaning that it is shaped differently depending on whether one is writing a poem or solving an engineering problem. This makes sense, at an intuitive level. What is less obvious is the fact that our conceptions of creativity, that differ so widely, have their own history. They grow out of certain types of society and reflect the different needs, hopes and, indeed, fears of different communities. For instance, in Ancient Greece, the myth of Prometheus warns bold creators about the possible consequences of their deeds. When Prometheus stole fire – a metaphor for the creative spark – from the Gods, to give it to the people, he enraged Zeus and received his punishment. Today, at least at a discourse level, organizations and governments want more creativity and innovation – they want the "flame" and are ready to take the risk. In order to understand why this is the case, we would need to go beyond scientific definitions of creativity and reflect on the characteristics of our current era.

It is a fact that field of creativity studies is, like any other, a child of its own epoch (Hanchett Hanson, 2015; Mason, 2003). Previously, I discussed three main paradigmatic views of creativity, going from a fascination with the genius (the He-paradigm), to claiming creative potential as universal (the I-paradigm) and, more recently, creativity as a fundamentally collaborative endeavor (the We-paradigm) (Glăveanu, 2010). The We-paradigm, in particular, bears the mark of today's age of connectivity and communication, a world that is changing rapidly and is based on an increased number of exchanges between people, communities and countries, from goods to information and travelling. The Internet and the rapid development of online networks changed the way we do things, as well as the way we think about ourselves, including the mind and the brain. The image of the *network* is pervasive in many disciplines and very influential among creativity researchers. It is hard, in today's world, to think about creativity only in terms of individuals working separately and achieving great achievements on their own. The time of "polymath geniuses" like Leonardo da Vinci has passed and, nowadays, we have a wealth of accumulated knowledge that nobody can master in its entirety. We don't create in the same way we did in the past (think, for instance, about the on-going transformation of cultural traditions) and we don't think about creativity as we did before.

This begs the question: *how do we understand creativity today, why and with what consequences?* This is the key question raised in this paper. Its aim is thus to contextualize our theories and models of creativity and observe how they impact current practices of assessing and enhancing creative expression. Most of all, its aim is to offer a sociocultural reading of creativity as a practice and as a scientific domain. Guided by cultural psychological premises, I start from the assumption that the practice of creativity and our conceptions of it are deeply inter-related; in fact, they continuously shape each other. To take a mundane example, the way we appreciate (or not) children's creativity in class illustrates wider societal discourses that consider children either as active or passive agents in relation to their environment (Glăveanu, 2011a). In exchange, these conceptions shared by teachers, parents, etc., will be internalized by the child and influence how and when he or she is going to act creatively. More than this, the co-evolution of how we express ourselves creatively and what we believe creativity is shapes to a great extent the assessment tools we use and the techniques for enhancing creativity we envision. These links between theory and practice, assessment and intervention, will be explored here by referring to three prototypical ways of thinking about creativity – as art, as invention, and as craft (see also Glăveanu, *online first*) – each one discussed in turn, as follows. In every case, I start from how creativity is defined, then continue with a discussion of the historical roots for each definition, with its impact on creativity research, and end with methodological and practical implications. The final discussion offers reflections on the need to move beyond Western-centered understandings of creativity and towards a view of creativity as situated, local, and multiple. Some consequences for education are considered in the end.

2. Creativity as art: spontaneity, originality, divergence

One of the oldest, more pervasive associations both in science and in lay thinking is the one between art and creativity. It is often assumed, across cultures, that artists are creative individuals or that art-making requires creativity. This assumption is so strong that it has been studied in the past as the "art bias" (Runco, 2007; Glăveanu, 2014) – the tendency to over-estimate the association between creativity and art. The notion of bias is not meant to deny the fact that artistic work does involve the creative transformation of materials, thoughts and feelings, and their transposition into a certain medium (e.g., visual, musical, tactile, and so on). It is an association that encourages artists to develop a creative identity as well as self-efficacy or the belief that they can perform creatively. However, the down side of this bias has to do with how lay people consider their own creativity in reference to the arts. It is not uncommon, thus, when asking people whether they are creative to hear them refer first to whether they engage or not in any artistic

activity (Glăveanu, 2011b); and, since most of them do not, the resulting self evaluation tends to be negative. Why is this (cross) cultural association so powerful? We can be reminded here about the nine muses of Greek and Roman mythology, each one extending its patronage over an ancient art. They were protected by Apollo (who, as a Sun god, was the emblematic creator) and visited by Pegasus (the winged horse that became later synonymous with the idea of inspiration). Later on, in the Renaissance, these connections were inscribed into sculptures, poems and came to be embodied by the great creators of the time who almost always were also artists or artists in the first place. Today, the association is reflected in extensive research done into creativity in the arts (for classic examples see Csikszentmihalyi & Getzels, 1971; Gardner, 1982), as well as the name of well-known journals and associations – for example, the APA division and journal ‘The Psychology of Aesthetics, Creativity and the Arts’.

However, the present-day fascination with artistic creativity cannot be explained fully by remembering the Antiquity or the Renaissance. The way we think about creativity and the arts has been shaped to a great extent by Romanticism, a broad artistic and intellectual movement that emerged in Europe at the end of the 18th century and peaked in the first half of the 19th century. Responding to the mechanistic worldview brought about by the Industrial Revolution and the rationalism embedded in the Enlightenment, Romanticism explored a variety of themes that continue to dominate creativity research: art, nature, the aesthetic, the sublime, fantasy and imagination, horror and madness. It championed the image of the *mad genius* – the sick, tormented artist who struggles to find a place in society – which led, in the centuries that followed, to a deep concern for the links between creativity and mental illness (see, for example, Kaufman, 2001; Simonton, 2005). These links are preserved in the literature, media, and popular culture. Most of all, Romanticism offered an understanding of creativity as an untamed and untamable force, a blessing as well as a curse, a feature of special individuals, particularly those artistically inclined. The melancholy associated with great creative power was one of the favorite themes of “dark romanticism”. This sub-current, expressed in literature, gave us the classic horror tale: Mary Shelley’s “Frankenstein”. Beside its impact on popular culture, this story needs to be recognized as, first and foremost, a story about creativity which depicts the struggle (until death) between a creator and his creation.

What does all of this have to do with creativity research? We have today, increasingly, studies of malevolent creativity (Cropley, Cropley, Kaufman, & Runco, 2010) but the legacy of Romanticism left its mark on the definition of the concept itself. As mentioned at the start, creativity is most often defined in terms of a combination between novelty/originality and value or utility. The novelty and originality dimensions were reinforced by the Romantic emphasis on spontaneity and self-expression in acts of creation. Novelty is the most basic criterion of creativity and it is not synonymous with originality. Originality designates the “distance” between it and other, existing products. As such, something can be new but not original (think, for instance, about products that come out of industrialized production) or, on the contrary, original but not new (think about Mona Lisa, a painting that is certainly not new anymore and yet continues to be appreciated as highly original for its time and even by today’s standards). Although a creative product needs to be novel and original as well as valuable, it is often the first two characteristics that matter the most. The *novelty bias* in creativity research and in society should concern us since it is widely recognized that things that are highly original but not valuable or meaningful in any way belong to the realm of the bizarre rather than the creative. The bizarre was widely cultivated by Romantic poets and writers and it does attract a lot of artists and creators in today’s popular culture (making sometimes people wonder if certain products do belong in art galleries or museums after all). The central features of creativity supposed to be at the root of novelty and originality are *spontaneity, self-expression and authenticity*. Creative people, whether they are artists or not, tend to be considered creative because they are free in their work, unconventional, and able to explore and express their emotions.

How did this legacy impact creativity assessment and the enhancement of creativity? The emphasis on novelty and originality is arguably the foundation for the most popular measures of creativity today – tests of divergent thinking. Pioneered by Guilford (1957), divergent thinking is the process that leads to an increased number of ideas instead of looking for only one “good” idea (a process called convergent thinking and often cultivated at school). Guilford wanted to capture creative potential by investigating the person’s ability to think divergently. One of the oldest ways of doing this became the Unusual Uses Task, in which participants are asked to give as many potential uses of common, everyday objects as they can (such as a brick, a paperclip, a box, and so on). There are many tests of creativity and imagination today that either partially or fully examine divergent thinking (e.g., Guilford, Christensen, Merrifield, & Wilson, 1960; Wallach & Kogan, 1965). The most popular of them all remains, however, a battery of tests proposed by Torrance (1966) known as the Torrance Tests of Creative Thinking (TTCT). The TTCT includes unusual uses items as well as many others, grouped under verbal and non-verbal types of tasks. By expanding the test to drawing, it allows for creativity to be tested at lower ages as well as assessed more confidently across cultures. This philosophy impacted more than creativity assessment. A wide range of creativity enhancing techniques today aim explicitly at stimulating or exercising creative thinking by using improvisation, role play or the joint generation of ideas. Brainstorming, the classic creativity tool, was proposed in the 1950s by Osborn (1953) and was based on the principle of generating as many ideas as possible, for as bizarre as they might be, without criticizing them (evaluation takes place at a second stage). What both these tests and these techniques have in common is the assumption that creativity is based on spontaneity, originality and divergence. In other words, art-like processes. However, it is true that art itself relies on many other processes and that creativity in other domains might be very different from this. Perhaps even the reverse of what has been pioneered by the Romantics. These “other side” of creating is explored next.

3. Creativity as invention: science, technology and utility

There is another facet of creativity that, at least on the surface, has little to do with the arts. It is the creativity involved in solving practical problems, in engineering and in discovery. It is the creativity of invention, often associated with the fields of science and technology. While less popular than Romantic conceptions of creativity, the interest for scientific creativity led to a well-developed area of study (Gruber & Barrett, 1974; Simonton, 2003). Instead of divergent thinking, its paradigmatic expression is in *problem*

solving, from everyday life problems to highly complex, collective challenges. In this area it is, in fact, *insight* and even *convergent thinking* that are required. Solving problems creatively involves highly developed skills for analytical thinking and, indeed, the creativity of invention prompted a long line of research into creativity and intelligence. From the beginning, studies of the genius linked creativity to eminence or a very high level of IQ. For Galton (1874), one of the pioneers in this area, creative genius was hereditary rather than developed through education. In the following centuries, this image has changed and, today, there is a great interest to understand the life circumstances of highly eminent people rather than their genetic makeup. Still, the question of how intelligence relates to creativity remains (Karwowski et al., 2016; Silvia, 2015). While most researchers nowadays agree that intelligence and creativity are not the same, effective problem solvers are usually considered to require both (for Sternberg, 2015, even more: analytical, creative, practical and wisdom-based intelligence). There is also a long-standing interest for the different stages of scientific creativity. In fact, some of the oldest models of the creative process are based on the accounts of famous scientists such as Henri Poincaré (Lubart, 2001). Wallas (1926) built his four stages of creativity on such accounts: preparation, incubation, illumination and verification. While his model can be applied more widely, it is particularly useful when it comes to describing creative problem solving.

What are the historical roots of this understanding of creativity? Inquiries into the nature of invention certainly enjoy a long history, just like reflections about artistic creativity. And yet, one of the most recent historical times that shaped our modern conception of scientific creativity (and, to a great extent, creativity in general) was the Enlightenment. The Age of the Enlightenment designates an intellectual movement that dominated Europe during the 18th century. Its trust in the power of reason to shape nature and society transformed both. The Industrial Revolution accomplished the transformation of nature through the use of new technologies. Societies were, in turn, transformed by applying the principles of liberty, tolerance and fraternity. Rationality and science became the engines of progress and, with them, a new type of creativity started to be valued. It was the creativity involved in solving practical and technical problems, in mastering nature and building better societies. The creativity of invention was not only required but also prized, and it continued to be so in the centuries that followed. In many ways, today's surge in technological progress inherits the spirit and, often, the ideals of the Enlightenment. Just like it in the case of dark Romanticism, this kind of creativity has its own pitfalls. By imposing a rational organization of society and labor, for instance, it also created impersonal versions of both. Today, the use of modern technologies including social media has the potential to increase connectivity and open us towards multiple points of view. Unfortunately, as recent political events have shown, it can also make us more isolated from each other, enjoying the comfort of our own "information bubbles". And yet, invention and its modern-day sibling, innovation, are seen as the engine of progress for individuals, organizations and societies around the world. The growing literature on creativity and innovation (Anderson, Potocnik, & Zhou, 2014) testifies to this interest and brings together researchers from multiple disciplines, from psychology to management.

In terms of the definition of creativity, the emphasis on science and invention counter-balances the focus on novelty and originality specific for the arts. In fact, it even prioritizes utility or value to an extent that prompted some researchers to propose a new type of creativity: functional creativity (Cromptley & Cromptley, 2005). This form of creative expression brings to the fore socially useful creations and it is often encountered in science, engineering and design activities. Of course, there are ways to problematize the accent on utility or value at the expense of novelty and originality. Just like highly original but not useful products can be labeled as bizarre, products that are very useful but not so novel can be easily labeled as conventional. And creativity is supposed, by definition, to go beyond the conventional. In a similar vein, functional creativity often requires more convergent than divergent thinking processes. This, again, might sound counterintuitive given the long tradition of associating creativity and divergent thinking. And yet, it is undeniable that solving problems depends on some forms of convergence and synthesis, as well as extensive knowledge and motivation (Amabile & Pratt, 2016). The relation between creativity and knowledge is as complex as the one between creativity and intelligence. In both cases, "too much" might not always be better and more recent studies argue that a lot of accumulated knowledge doesn't impair creativity especially if this knowledge is flexibly organized. In the end, the creativity of invention relies more on insight than inspiration. Getting the "right idea" is what mathematicians like Poincaré emphasized when describing his own creative process. Later on, implementing the creative idea calls for both convergent as well as divergent thinking and action.

What kinds of creativity assessment and techniques for the enhancement of creativity emerged from this approach? Problem solving becomes here the paradigmatic methodological choice. For instance, creative insight problems that require one (or at least a limited number of) fitting answer(s) are also popular in the field of creativity studies. One of the most famous ones asks participants to connect nine dots arranged in a square with the help of only four straight lines (Duncker, 1945). While seemingly easy, this task requires a certain insightful idea: that the lines can go beyond the perceptual square made up by the dots. Other creativity tests ask participants to find the fourth concept that connects three given ones. This is the principle behind the Remote Associations Task (Mednick & Mednick, 1967) and it, too, builds on the capacity for insight and convergent thinking. Interestingly, both types of tasks do require participants to diverge, at least in the first instance, trying out different ideas. But the essence of functional creativity is coming up with a product (an idea or a word in the cases above) that "works". This philosophy is translated into training programs for creativity that help people solve problems. These programs are usually organized around a number of stages and offer participants tools that enable them to think creatively depending on where they are in the problem solving cycle. The popular method of design thinking (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013) is a good example of a more or less organized set of tools enabling people to generate highly novel and practical ideas. But, of course, the view of creativity these methods promote is not without its critics. For many, solving problems is the subject matter of intelligence, not creativity. For others, the very essence of creativity (its Romantic spirit) is chocked by rationalizing and organizing it. In the end, there is a clash here between artistic and scientific creativity that are sometimes separated too sharply (see Dewey, 1934). Is there a third option? And, if so, how would it look like?

4. Creativity as craft: mastery, apprenticeship and everyday life

Although artistic creativity and the creativity of invention have been presented as opposites, there are certainly commonalities between the two. Also, there are other domains of creativity that don't strictly belong to the fields of either arts or sciences (Kaufman, Glăveanu, & Baer, 2017). Some of these are not defined in institutional terms, in the same ways as the arts and sciences. For example, there is a lot of creativity involved in everyday life activities, from cooking to driving and solving mundane problems at home or at work, and yet this kind of creative expression often flies “under the radar” of creativity researchers. This is the creativity specific for performing rituals and traditions, often in a new manner, in mixing and sharing cultural content online, on social media, in constantly improvising whenever resources are scarce, etc. It is, in many ways, a creativity that goes beyond the boundaries of established domains and is specific for participating in culture, together with others. A prototypical form of this kind of creativity is craft - the range of activities, usually emerging out of handiwork, that both continue and renew cultural traditions and social practices. Craft requires *skill, practice, and leads to mastery*. Creativity as a mark of masterful activity transcends (by integrating) existing dichotomies, discussed above, between originality and value, divergence and convergence, science and art. Most of all, it challenges the separation between self and other since no craft was ever invented or performed by solitary individuals. On the contrary, craft activities grow out of apprenticeships and learning with and from others. They require what Barbara Rogoff (2003) referred to as guided participation: not formal episodes of schooling, but learning by observing and being part of a certain social practice. Due to this open, interactive nature of craft creativity, there are few “gatekeepers” (unlike in the arts or sciences) who are asked to judge the final product. Indeed, the product and process oftentimes merge into the continuous practice of cultural engagement.

What are the historical roots of this third way of understanding creativity? Just like the other two, we can discover interest for craft and craftsmanship since the Greek and Roman Antiquity. Unfortunately, though, some of the first reflections on these activities explicitly denied them creative value. Plato's division between *episteme* and *techné*, for instance, meant that craftsmen were seen as mere technicians rather than creators in their own right (see Plato, 1997, complete works). The division between artists and craftsmen in particular echoed through the centuries. It was reformulated, for example, in Collingwood's (1938) accusation of craft as pre-conceived, repetitive and fundamentally uncreative. And yet, there is also another history to be uncovered of the relation between art and craft. John Dewey (1934) located the origin of both within the everyday efforts of people to make their environment more pleasing and invest it with both beauty and utility. At the end of the 19th century, the Arts and Crafts Movement (see Triggs, 2009) capitalized on these connections and actively promoted the use of simple forms in decoration, reminding of folk culture. Today, the boundary between artists and craftsmen is blurred even further with many recognized artists deliberately using the techniques of crafts and with craftsmen emphasizing more and more the artistic or aesthetic quality of their work. What this complex history comes to show is, first of all, the versatility of craft and the fact it builds on a variety of practices, from more mundane to professional, from utilitarian to aesthetic. Second, the reaction and oftentimes resistance to craft demonstrates certain preconceptions about creativity that draw, mostly, from the ideals of Romanticism and the Enlightenment. For these two, “true” creativity is most of all the one that changes or revolutionizes society and culture (Big-C creations). Within the craft paradigm, creativity doesn't produce a break but continuity with the past. What does this new understanding mean in terms of how we define creativity?

To recap, creativity is usually defined using a double criterion: novelty and originality on the one hand, value or utility on the other. I argued that these two criteria represent different types of emphasis and describe a markedly different dynamic of creativity. Novelty and originality are often associated with arts-like creative processes that have been acclaimed during Romanticism and up to this day. Value and utility are specific for invention and science-based creativity, prioritized from the Age of the Enlightenment onwards. If this is the case, what can a third way of approaching creativity, as craft, offer? As I briefly mentioned above, craft designates a versatile practice that often combines divergent and convergent thinking and, most of all, applies our thinking to the material environment. Craft is about *making or doing* rather than simply producing ideas. But is creativity as craft merely a synthesis of the other two approaches? No, in fact it adds a third element to the definition of creativity: *context*. One of the first attempts to introduce context in the definition of creativity comes from the 1950s when Stein (1953) proposed the two criteria of creativity but added that its recognition depends on the group of reference. The sociocultural approach adopted in the paper is especially sensitive to this aspect since it considers context as participating in the creative process and not only as something external to it. Craft creativity depends on many contextual elements: social relations, material support, existing traditions, and so on (Glăveanu, 2017). By engaging with the challenges and using the resources of everyday life, its products need to be meaningful for the context they are produced in rather than “universally” novel or valuable. Creativity as craft ultimately locates creative action within culture, both traditional and contemporary. Creators as craftsmen are not (only) the wood carvers, textile workers or quilters of past centuries, they are also the young people of today who mix videos and become masterful participants on social media. Through craft, there is a bridge built across time and culture between the two.

What are the implications of this third understanding of creativity for assessment and enhancement techniques? First of all, craft creativity cannot be assessed simply in terms of “creative potential” but needs to consider creative achievement. This is because, within this paradigm, it makes no sense to separate potential from the actual activities of people. Mastery doesn't exist in potential: it either is manifest or is not or, better said, it is always in the process of being developed through practice. There are some creativity assessment tools that evaluate creative achievement, mainly through self-report and in a domain-specific manner (see Kaufman, 2001). From a craft creativity standpoint, it would be useful, in the future, to develop methodologies that look at what people actually do when they create, in real time. This would certainly require some methodological innovations and perhaps abandoning the impossible ideal of complete standardization when it comes to assessment. In turn, these techniques could be used also to foster creativity and not only evaluate it. There are many kinds of masterful activities that are currently employed to enhance creativity, including various forms of improvised collaboration, from jazz to theatre (Sawyer, 2000). These activities are markedly different than

scripted techniques that focus on developing the thinking of isolated individuals. They require interaction and a certain kind of material or materialized performance. They also build on [Vygotsky's \(1987\)](#) notion of zone of proximal development by scaffolding the creative activity of each person through collaboration with others and the resources of a shared culture.

5. Concluding thoughts: how to re-create creativity

In this paper, I argued that creativity is not a unitary construct or phenomenon. In fact, it is a scientific label applied to a variety of human actions or activities that leads to outcomes appreciated as more or less to novel, original, valuable or meaningful. Depending on what we emphasize from these qualities we will have different – sometimes completely different – images of creativity emerging. Three have been identified here as *artistic creativity*, *the creativity of invention*, and *craft creativity*. These prototypical images have their own historical roots and their distinctive practical consequences, particularly when it comes to assessing creativity or enhancing it. An artistic perspective on creativity, grounded in the ideals of Romanticism, makes us sensitive to the novelty or originality of the creative product and to the divergent and spontaneous nature of the creative process. In contrast, an invention perspective, drawing on the legacy of the Enlightenment, emphasizes utility and value, appreciates functional creativity and studies its processes in terms of problem solving and creative insight. A third option was introduced, that of creativity as a form of craft, prioritizing mastery, apprenticeships and everyday life activities, in other words collaborative and adaptive forms of creativity rather than solitary and revolutionary achievements. While these prototypical images are presented in succession this doesn't mean to imply that the science of creativity moved, gradually, from one approach or focus to the next. The fact that each one of these understandings has old roots points to the idea that they *co-existed* across history and they certainly do today; a simple review of existing literature of societal debates about creativity will easily demonstrate this. Neither is this presentation meant to imply that one approach is better than the rest. While craft creativity is the closest to how sociocultural psychology portrays creative action, this doesn't make it superior to other conceptions and practices of creating. Each one of them is useful depending on context and should be studied and fostered in a contextual manner. This is why it is so important to ask “*which creativity are we talking about?*” or “*which creativity do we want to educate?*” when discussing with colleagues, researchers or practitioners.

There is yet another important point to make here. That is that the story of creativity presented above is a typically Western one. It builds on Western history and intellectual movements and, it must be recognized, a lot of what we know today as the psychology of creativity is a Western (primarily American) project. It is no coincidence that the “birth” of this discipline is identified by many with the moment in 1949 which Guilford gave a presidential address at the American Psychological Association in which he urged his colleagues to study and educate creativity (see [Guilford, 1957](#)). What is the Eastern narrative? In raising this question I am fully aware of the fact that cultures don't fit neatly within such artificial categories such as “West” and “East”. There are as many different stories of creativity to be told between the US and Switzerland, just as they are between Japan and Vietnam, for instance. And it is important, when paying attention to cultural context, to go beyond national culture itself. Nonetheless, the question remains: what are the Eastern or Southern approaches to creativity and their prototypical images? What are the histories and philosophies that underpin them? How can we reflect on the definition of creativity in these cultural spaces? What would that mean for how we discover, measure and foster creative action? In the literature there has been, for decades, an interest in the East–West differences in how creativity is conceived ([Lubart, 1999](#); [Morris & Leung, 2010](#); [Niu & Sternberg, 2006](#)). Most of the time, the Eastern view of creativity is explained in terms of Confucian beliefs and it is said to stress evolution over revolution, community ties over isolated individuals, meaningfulness over novelty, tradition over change. In many ways, these characteristics would bring it close to the third perspective on creativity introduced above: creativity as craft. What are the differences and similarities? And why does it matter?

If it does matter, and I believe it does, then it becomes crucially important to develop in research and in education more *emic* or *local understandings* of creativity instead of simply “importing” theories and models developed in other geographical and cultural places ([Glăveanu & Sierra, 2015](#)). This is a key difference between cross-cultural and sociocultural psychology ([Shweder, 1990](#)). The first one uses similar definitions and measurements to compare different populations or cultures. The second one tries to understand local meanings and practices and study each culture in its own right, without the need to compare them. The typical cross-cultural question about creativity is whether people living in Western or Eastern cultures are more creative. There are several studies done on this and some suggest that Westerners might achieve higher scores than Easterners on some measures (see [Ng's, 2001](#), provocative book). A sociocultural critique of this conclusion and this overall approach asks: what type of creativity has been actually studied and how? How did the definition and measurement tool respect (or ignore) local understandings and practices? Are we here simply judging all creativity based on Western standards and, if so, what does this do to people living in other cultures? The simple (and troubling) answer to this last question is that what we are doing is *trying to construct a unitary definition for a multi-faceted construct and educate people around the world to be creative in the same way – namely a Western way*, which predominantly considers creativity as art or invention. Not only are our measuring tools (e.g., divergent thinking tests, problem solving tasks) loaded with Western ideals, they also end up disadvantaging people who think and practice creativity in different ways (for example, creativity as craft). The immediate consequence is that we don't recognize other forms of creativity than the one we are testing for or, even worse, that we end up encouraging only the “right” way of being creative. Needless to say, this push towards uniformity and sameness is anything but creative.

What can educators do in this regard? They should, first of all, be much more reflexive when using definitions, theories or assessment tools for creativity. We need to ask ourselves more often: what do these definitions imply? What kinds of creativity do they recognize and which do they ignore? How are they constructing creativity for us and what does that mean in practice? In the classroom, art based definitions of creativity will favor students who are spontaneous and highly expressive, problem solving approaches will likely favor the conscientious and practically minded, and a craft view will encourage those who collaborate well.

Students who don't fit these models might be seen as less creative or in need of special training. Conversely, a teacher who is sensitive to multiple creativities and understands their origins, advantages and disadvantages, would be more inclined to cultivate diversity and offer each students the tools and support needed to develop their own style and form of creative expression. He or she would also go beyond the traditional question of “*how creative is X*” (where X is a product, a person, a process, or a culture). Instead, teachers should ask more often “*how is X creative*”, or in which ways? This would help them explore local understandings and practices of creativity in and outside the classroom. In the end, such teachers would promote the value of different ways of thinking about creativity and different ways of being creative. Is it something that is not artistic? It doesn't produce scientific value or invent anything? Is it not highly new or original? Is it done in collaboration with others? These are not indicators of a lower degree of creativity; they just reflect, as discussed here, creativities of a different kind.

Acknowledgements

This is a shorter, edited version of the keynote offered at the at the international workshop “Creativity development and opportunities and business and start up ideas” organized by Vietnam National University in Hanoi, 11–12 August 2017. I would like to thank the organizers of this event and the participants for their feedback.

References

- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157–183.
- Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333.
- Collingwood, R. G. (1938). *The principles of art*. Oxford: Clarendon Press.
- Cropley, D. H., & Cropley, A. J. (2005). Engineering creativity: a systems concept of functional creativity. In J. C. Kaufman, & J. Baer (Eds.). *Faces of the muse: How people think, work and act creatively in diverse domains* (pp. 169–185). Hillsdale, NJ: Lawrence Erlbaum.
- Cropley, D. H., Cropley, A. J., Kaufman, J. C., & Runco, M. A. (Eds.). (2010). *The dark side of creativity*. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M., & Getzels, J. W. (1971). Discovery-oriented behavior and the originality of creative products: A study with artists. *Journal of Personality and Social Psychology*, 19(1), 47–52.
- Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.
- Duncker, K. (1945). On problem-solving. *Psychological Monographs*, 58(5), 1–113.
- Galton, F. (1874). *English men of science: Their nature and nurture*. London: MacMillan & Co.
- Gardner, H. (1982). *Art, mind, and brain: A cognitive approach to creativity*. New York, NY: Basic Books.
- Glăveanu, V. P. (2010). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New Ideas in Psychology*, 28(1), 79–93.
- Glăveanu, V. P. (2011a). Children and creativity: A most (un)likely pair? *Thinking Skills & Creativity*, 6(2), 122–131.
- Glăveanu, V. P. (2011b). Is the lightbulb still on? Social representations of creativity in a Western context. *The International Journal of Creativity & Problem Solving*, 21(1), 53–72.
- Glăveanu, V. P. (2014). Revisiting the ‘art bias’ in lay conceptions of creativity. *Creativity Research Journal*, 26(1), 11–20.
- Glăveanu V.P., Creativity in perspective: A socio-cultural and critical account, *Journal of Constructivist Psychology*, online first.
- Glăveanu, V. P. (2017b). Creativity in craft. In J. C. Kaufman, V. P. Glăveanu, & J. Baer (Eds.). *The Cambridge Handbook of Creativity in Different Domains* (pp. 616–632). Cambridge: Cambridge University Press.
- Glăveanu, V. P., & Sierra, Z. (2015). Creativity and epistemologies of the South. *Culture & Psychology*, 21(3), 340–358.
- Gruber, H. E., & Barrett, P. H. (1974). *Darwin on man: A psychological study of scientific creativity*. New York, NY: Dutton.
- Guilford, J. P., Christensen, P. R., Merrifield, P. R., & Wilson, R. C. (1960). *Alternative uses manual*. Sheridan Supply Co.
- Guilford, J. P. (1957). Creative abilities in the arts. *Psychological Review*, 64(2), 110–118.
- Hanchett Hanson, M. (2015). *Worldmaking: Psychology and the ideology of creativity*. London: Palgrave.
- Johansson-Sköldberg, U., Woodilla, J., & Çetinkaya, M. (2013). Design thinking: Past, present and possible futures. *Creativity and Innovation Management*, 22(2), 121–146.
- Karwowski, M., Dul, J., Gralewski, J., Jauk, E., Jankowska, D. M., Gajda, A., et al. (2016). Is creativity without intelligence possible? A necessary condition analysis. *Intelligence*, 57, 105–117.
- Karwowski, M. (2010). Are creative students really welcome in the classrooms? Implicit theories of good and creative student/personality among polish teachers. *Procedia-Social and Behavioral Sciences*, 2(2), 1233–1237.
- Kaufman, J. C., & Beghetto, R. A. (2009). Beyond big and little: The four c model of creativity. *Review of General Psychology*, 13(1), 1–12.
- Kaufman, J. C., Glăveanu, V. P., & Baer, J. (Eds.). (2017). *The cambridge handbook of creativity in different domains*. Cambridge: Cambridge University Press.
- Kaufman, J. C. (2001). The Sylvia Plath effect: Mental illness in eminent creative writers. *The Journal of Creative Behavior*, 35(1), 37–50.
- Lahlou, S., & Beaudouin, V. (2016). Creativity and culture in organizations. In V. P. Glăveanu (Ed.). *The palgrave handbook of creativity and culture research* (pp. 475–498). London: Palgrave.
- Lubart, T. (1999). Creativity across cultures. In R. Sternberg (Ed.). *Handbook of creativity* (pp. 339–350). Cambridge: Cambridge University Press.
- Lubart, T. I. (2001). Models of the creative process: Past, present and future. *Creativity Research Journal*, 13(3–4), 295–308.
- Mason, J. H. (2003). *The value of creativity: An essay on intellectual history, from Genesis to Nietzsche*. Hampshire: Ashgate.
- Mednick, S. A., & Mednick, M. T. (1967). *Examiner's manual: Remote associates test*. Boston: Houghton Mifflin.
- Morris, M. W., & Leung, K. (2010). Creativity east and west: Perspectives and parallels. *Management and Organization Review*, 6(3), 313–327.
- Ng, A. K. (2001). *Why Asians are less creative than Westerners*. Singapore: Pearson.
- Niu, W., & Sternberg, R. J. (2006). The philosophical roots of Western and Eastern conceptions of creativity. *Journal of Theoretical and Philosophical Psychology*, 26(1–2), 18–38.
- Osborn, A. F. (1953). *Applied imagination: Principles and procedures of creative thinking*. New York, NY: Charles Scribner's Sons.
- Plato (1997). In M. John Cooper (Ed.). *Complete works*. Indianapolis: Hackett Publishing Co.
- Rogoff, B. (2003). *The cultural nature of human development*. Oxford: Oxford University Press.
- Runco, M. A., & Jaeger, G. J. (2012). The standard definition of creativity. *Creativity Research Journal*, 24(1), 92–96.
- Runco, M. (2007). *Creativity. Theories and themes: Research, development, and practice*. Burlington, MA: Elsevier Academic Press.
- Sawyer, R. K. (2000). Improvisational cultures: Collaborative emergence and creativity in improvisation. *Mind, Culture, and Activity*, 7(3), 180–185.
- Shweder, R. (1990). Cultural psychology – what is it? In J. Stigler, R. Shweder, & G. Herdt (Eds.). *Cultural Psychology: Essays on comparative human development* (pp. 1–43). Cambridge: Cambridge University Press.
- Silvia, P. J. (2015). Intelligence and creativity are pretty similar after all. *Educational Psychology Review*, 27(4), 599–606.
- Simonton, D. K. (2003). Scientific creativity as constrained stochastic behavior: The integration of product, person, and process perspectives. *Psychological Bulletin*,

- 129(4), 475–494.
- Simonton, D. K. (2005). Are genius and madness related? Contemporary answers to an ancient question. *Psychiatric Times*, 22(7), 21–23.
- Stein, M. I. (1953). Creativity and culture. *The Journal of Psychology*, 36(2), 311–322.
- Sternberg, R. J. (2005). Creativity or creativities? *International Journal of Human-Computer Studies*, 63(4), 370–382.
- Sternberg, R. J. (2015). Successful intelligence: A model for testing intelligence beyond IQ tests. *European Journal of Education and Psychology*, 8(2), 76–84.
- Torrance, E. P. (1966). *The Torrance tests of creative thinking-norms-technical manual research edition-verbal tests, forms a and B-figural tests, forms a and B*. Princeton, NJ: Personnel Press.
- Triggs, O. L. (2009). *The arts & crafts movement*. New York, NY: Parkstone Press.
- Vygotsky, L. S. (1987). Thinking and speech (N. Minick, Trans.). In R. W. Rieber, & A. S. Carton (Eds.). *The collected works of L. S. Vygotsky. Vol. 1. Problems of general psychology* (pp. 39–285). New York, NY: Plenum Press.
- Wallach, M. A., & Kogan, N. (1965). *Modes of thinking in young children*. New York, NY: Holt, Rinehart and Winston.
- Wallas, G. (1926). *The art of thought*. New York, NY: Harcourt, Brace and Company.