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Rewriting the Language of Creativity: The Five A's Framework

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For the past 5 decades the psychology of creativity has been influenced by what is known as the 4 P's of creative expression: person, process, product, and press. This conceptual schema, initially proposed by Rhodes (1961), helped researchers structure their thinking about the phenomenon. However, it also supported an individualistic, static, and oftentimes disjointed vision of creativity. The present article aims to rewrite this fundamental language of the discipline by using terms that explicitly endorse a systemic, contextual, and dynamic approach. The 5 A's framework—actor, action, artifact, audience, affordances—is grounded in current literature from sociocultural and ecological psychology as well as theories of the distributed mind and tries to achieve a more comprehensive and unitary perspective on creativity. Several theoretical, methodological, and practical implications are considered.

Keywords: creativity, the four P's, cultural psychology, distributed cognition, ecological psychology

The language of creativity or, better said, the language of creativity theory and research in psychology is a language written largely from the perspective of the individual and, within individuals, from the perspective of cognitive functioning. Key terms that help us, to this day, organize the growing literature in the field reflect not only an inherent individualism and cognitivism (specific, to some extent, to the modern construction of psychology; Gergen & Gigerenzer, 1991) but also a rather static, disjointed, and acontextual approach to creativity. There is however a pressing need to expand our language and consequently our thinking about this phenomenon, to do justice to its true complexity and relational nature and be able, ultimately, to understand and cultivate creativity in a variety of domains.

The notion of creativity, most probably deriving from the Indo-European root *ker* or *kere* (to grow) via the Latin *creatio* or *creatus* (to make grow), means ultimately to "bring something new into being" (Weiner, 2000, p. 8). This basic understanding has led to a surprisingly high number of conceptions accumulating from the second half of the last century onward. About five decades ago, an educational researcher, Mel Rhodes, already perplexed by the multitude of descriptions of creativity in his time, set out to find a unitary definition of the phenomenon (Rickards, 1999). In an article first published in 1961, the only known outcome of his dissertation, Rhodes collected more than 40 definitions of creativity and analyzed their content. He concluded that creativity theory reflects four distinct (and yet overlapping at times) strands labeled the person, the process, the product, and the press (roughly associated with environmental influences). That article and the particular classification Rhodes proposed had a great impact on the creativity literature ever since and became referred to as the "four P's of creativity." In the words of the author,

> My answer to the question, "What is creativity?", is this: The word creativity is a noun naming the phenomenon in which a person communicates a new concept (which is the product). Mental activity (or mental process) is implicit in the definition, and of course no one could conceive of a person living or operating in a vacuum, so the term press is also implicit. (Rhodes, 1961, p. 305)

It is important to notice that for Rhodes the four resulting strands emerged out of conceptualizations that were not always mutually exclusive. As such, "each strand has unique identity academically, but only in unity do the four strands operate functionally" (Rhodes, 1961, p. 307). Indeed, coming out of a survey of definitions, the idea of the four P's stimulated further developments and helped researchers "locate" their efforts and make links between the different categories. Thus, the four P's of creativity—improperly referred to as a "model" and more akin to a framework or conceptual organizer—became, in time, part of the canonical body of theories in the creativity literature alongside other consecrated models such as Wallas's (1926) four stages of the creative process and Guilford's (1967) distinction between convergent and divergent thinking. However, being placed at the level of metatheory, Rhodes's formulation provided in a sense more than other attempts that consequently were located within one or another of the four P's; it offered the backbone of creativity theory and research for the decades to come.

Rightfully compared by some with the periodic table of elements (Isaksen, Dorval, & Treffinger, 2011, p. 6), this simple alliterative schema became very influential in shaping creativity as an emerging academic discipline (i.e., international conferences were structured around its elements; Rickards, 1999). It is no surprise then that, in 2004, Runco's Annual Review presentation of creativity recognized it as "probably the most often-used structure for creativity studies" (p. 661). Undeniably, a quick examination of existing literature confirms this claim, and today one can find a multitude of articles and books using the person, process, product, press framework to structure literature reviews if not pieces of empirical research. Contributions using the "model" range from general theoretical presentations (Feldhusen & Goh, 1995; Kozbelt, Beghetto, & Runco, 2010; Moran, 2009; Richards,

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1999; Runco, 2004); materials focused on methodology, assessment, or idea generation techniques (Isaksen & Puccio, 1993; Kaufman, Plucker, & Baer, 2008; Lin, Hong, Hwang, & Ling, 2006; Murdock, Isaksen, Vosburg, & Lugo, 1993); or problem solving and decision making (Garfield, 2008; Hasirci & Demirkan, 2007; Isaksen et al., 2011; Isaksen, Puccio, & Treffinger, 1993; Jablokow, Jablokow, & Seasock, 2010; Santanen, Briggs, & De Vreede, 2004); to studies in more applied fields such as children and education (Beattie, 2000; Cropley & Cropley, 2008; Glăveanu, 2011a; Hunsaker, 2005; Smith & Smith, 2010) and organizational research, human resources, and marketing (Couger, Higgins, & McIntyre, 1993; Higgins, 1999; Horn & Salvendy, 2006; Horng, Hu, Hong, & Lin, 2011; Klein & Dologite, 2000; Mandico & Higgins, 1997; Watson, 2007).

Several authors did not only start from the given framework but tried to extend or elaborate it further (see Cropley & Cropley, 2009; Runco, 2003, 2007; Simonton, 1988), showing the centrality of this model and also the numerous debates surrounding it, especially in recent years, debates that are fruitful for stimulating a series of conceptual clarifications. In this article, I aim to contribute further to such efforts by "rewriting" and expanding the initial set of four elements in a way that draws inspiration from current developments in the psychology of creativity, namely the growing importance of social, systemic, ecological, and cultural models of the phenomenon. In light of these sources, I propose a five A's framework including the following elements: actor, action, artifact, audience, and affordances. Advocating for this new "model" of creativity involves not only renewing existing typologies but also radically changing the lenses through which we theorize and study creative acts.

Toward New Theoretical Frameworks

To look beyond traditional theories of the person, process, product, and press, we need to incorporate insights from a series of emerging inter- or multidisciplinary areas—the most recent developments in the field of social and cognitive psychology. These "new" theoretical perspectives, which are the basis for my proposal of a five A's framework of creativity, are represented by cultural or sociocultural psychology, models of the distributed and extended mind, and ecological psychology. I argue that adopting these lenses can help researchers go beyond a focus on isolated components because all the approaches listed above take as a basic unit of analysis the interaction between elements (e.g., between people, people and objects, etc.) rather than the elements themselves (e.g., person, product, etc.).

Cultural or sociocultural psychology is an eclectic field that has developed since the 1980s, a branch situated at the intersection between psychology, anthropology, sociology, linguistics, history, and the natural sciences (Valsiner & Rosa, 2007), and today is one of the rapidly expanding areas within the discipline. In a basic and well-known definition, "cultural psychology is the study of the way cultural traditions and social practices regulate, express, transform, and permute the human psyche" (Shweder, 1990, p. 1). What is implied by this formulation is the fact that cultural psychologists are interested in the "cultured" constitution and expression of the human mind (Rogoff, 2003) and consider self and other, psyche and culture, person and context to be interdependent and not to exist as two separate and simply interacting units (something assumed for instance by research concerned with the "press" factor of creativity). This is particularly relevant for understanding a phenomenon like creativity in which the person is embedded in/acts from within a system of social relations and the activity of creation produces meaning by integrating and transforming types of knowledge that, although individual in expression, are social in origin. Being an eclectic endeavor, sociocultural psychology is a diverse field bringing together theories that can shed light on different aspects of creativity. Under this broad theoretical umbrella we can group Vygotskian perspectives on development and the Russian cultural–historical school, activity theory, evolutionary approaches, the study of dialogicality, theories of social knowledge and social representations, and so forth. In the end, what connects these diverse strands is a strong commitment to the assertion that "mind emerges in the joint mediated activity of people. Mind, then, is in an important sense, 'coconstructed' and distributed" (Cole, 1996, p. 104).

In this regard, sociocultural psychology is in dialogue with the most recent advances in cognitive science, namely the idea of an embodied, embedded, enacted, and extended mind (see Rowlands, 2010). Mental processes are gradually seen as not taking place exclusively "in the head" but being situated and distributed between brain and body, person and environment. Such a perspective is extremely important for our discussion of creativity, a function traditionally grounded "inside" the person, the elusive mind of the creator and its functioning. This new, emerging science of the mind is still in its infancy, but empirical evidence is starting to accumulate from the fields of perceptual and developmental psychology to the study of robotics and human–computer interaction. A major contribution in this context is Edwin Hutchins's (1995a, 1995b, 2000) proposal of distributed cognition. As a theory drawing inspiration from cognitive science and sociocultural sources, its view of cognition and human knowledge is not restricted to representations built in the isolation of an individual's information processing mechanisms but distributed across people, across people and objects, and also distributed in time. This reflection is shared by other authors interested in what is called the *extended mind* (Clark & Chalmers, 1998). In a similar vein, they claim the important role of the environment for driving cognitive processes and argue that such processes extend into the world beyond individual actors. The characteristic feature of the human mind, according to these sources, is its dependence on and interaction with mediating tools and artifacts, something that prompted Keno (2010) to call the extended mind an ecological approach to humanized environments.

This brings us to the third pillar of *ecological psychology*, also a developing discipline that has benefited greatly from the pioneering works of James and Eleanor Gibson. The theory of perception and the notion of affordance brought into the field of psychology fundamentally changed our conception of the environment, particularly the physical world, and we can also find today some promising practical applications of the Gibsons' thought in research that deals with how people navigate their environment (e.g., Marcilly & Luyat, 2008; Sandseter, 2009). Here we can note strong connections between the ecological movement in psychology in the 1960s and the subsequent expansion of sociocultural psychology and distributed cognition. James Gibson's proposal that meaning exists in the environment and is not constructed by mind alone was radical for his time. The qualities we perceive in

the world do not "belong" to the perceiver or the world alone but are a function of both (Chemero, 2003). What this new ontogeny offered psychologists was a renewed interest for the material environment. Trying to overcome the Cartesian dualism that separates mind and matter and confines psychology to an exclusive study of the former, Gibson fought against the "alienation" of the material (Costall, 2006). His struggle unfortunately did not resonate in the mainstream psychology of creativity, which largely remains, to this day, ignorant of creative processes "outside" the mind of individual creators (with some exceptions within the more applied literature on organizational, educational, and social creativity). There is however great scope in recovering the role of the physical especially because creativity ultimately represents the act of engaging with existing artifacts to create new artifacts most often through the combined physical and mental labor of the creator.

In our effort to advance a sociocultural, distributed, and ecological framework for the psychology of creativity, we are also building on a growing body of existing work that challenges the mainstream and formulates a more contextual and situated conception of the phenomenon. Increasingly since the 1980s and 1990s, the influence of sociocultural psychology began to be felt and a shift started to take place from naturalism, person-centered, univariate, and positivistic research paradigms to social understandings, dynamic conceptions of creative cognition, and systems-oriented research models (Friedman & Rogers, 1998; John-Steiner, 1992; Jones, 2009; Montuori & Purser, 1995; Sawyer, 2012). The "cultural model of creativity" (see Sefton-Green, 2000, p. 220) and a We-paradigm type of approach (Glăveanu, 2010) were formulated and emphasized the necessity of considering creators and creations in relation to a series of audiences and a cultural background of accumulated artifacts, norms, and beliefs. Moreover, the notion of "distributed creativity" emerged in the work of several scholars (see Miettinen, 2006; Sawyer & DeZutter, 2009), although it was concerned more with social factors rather than the relation between actors and a material, physical environment. Timid attempts were made also to relate embodied processes to the generation of novelty (Slutskaya, 2006). These recent developments continue a consistent body of work often described as the *systems models of creativity* (see Csikszentmihalyi, 1988; Gardner, 1994).

Where does this leave the four P's approach? In itself considered a systemic model because of including elements outside of the individual creator (Isaksen et al., 2011), it nevertheless does little to specify any clear relations between categories. However, Moran (2009) sketched a rapprochement between Rhodes and Csikszentmihalyi when she associated the notion of field with that of press and the domain with the process of symbolic creation. Despite these elaborations, some pressing questions remain about the four P's; in Moran's (2009) formulation, "How can these dimensions be studied interactively? That is, what lens might support scholars to focus not on the elements themselves but on the dynamics among elements?" (p. 294). A tentative answer is offered as follows.

A Change of Perspective: The Five A's Model

One inherent limitation of the four P's framework resides in the fact that person, process, product, and press can well be studied in isolation and there is little, within this conception, that necessarily leads the attention of the researcher from one factor to the next. Those studying features of the person can do so without necessarily thinking about products, the process can be researched separately from press factors, and there is almost no connection between products and the environment. This goes against the intentions of Rhodes (1961) and it certainly does not offer us a realistic understanding of creativity (Runco, 2004). And yet, this was too often the case despite the fact that "many products are processes, and many processes are products. And a person is both a product and a process" (Barron, 1995, p. 32). Such interrelations need to be made explicit, and this is one of the first aims of the five A's model to be presented next. Second, the four P's, notwithstanding the fact that they include a "press" element, have been studied in ways that decontextualize creativity and do not engage with societal and cultural elements sufficiently. Person, process, and product are repeatedly considered in atomistic ways (Montuori, 2011) and the press associated with external influences that, at best, are always included in the equation of creativity, and at worst, should be silenced and marginalized in order to allow the creative process to proceed "undisturbed." The notion of material or physical press was almost completely ignored.

The five A's framework tries to address these limitations by rewriting our current language of creativity—from person to actor, from process to action, from product to artifact, from press to audiences and affordances (see Figure 1). As a discussion of each new term will soon come to show, this is more than a change of terminology but a fundamental change of *epistemological position*. In light of sociocultural sources, the actor exists only in relation to an audience, action cannot take place outside of interactions with a social and material world, and artifacts embody the cultural traditions of different communities. This is captured by Figure 2 in which the five "terms" of creativity are presented in their interrelation.

This visual depiction builds on previous work (Glăveanu, 2011b) that discussed creativity as a simultaneously psychological, social, and cultural process and adds to it a material dimension represented here by the creative use of affordances. It is a framework that is in line with old sociocultural models taking mediation as a fundamental process for human existence in the world and for psychological functioning (see Cole, 1996; Jovchelovitch, 2007; Vygotsky, 1997). In Figure 2, creative action emerges out of actor–audience relations that both produce and are mediated by the generation and use of new artifacts (objects, signs, symbols, etc.)

The four P's of creativity		The five A's of creativity
Focus on:		*Focus on:*
Internal attributes of the person	***Person*** → ***Actor***	Personal attributes in relation to a societal context
Primarily cognitive mechanisms	***Process*** → ***Action***	Coordinated psychological and behavioral manifestation
Features of products or consensus around them	***Product*** → ***Artifact***	Cultural context of artifact production and evaluation
The social as an external set of variables conditioning creativity	***Press*** → ***Audience*** / ***Affordances***	The interdependence between creators and a social and material world

Figure 1. Comparing the four P's and the five A's frameworks.

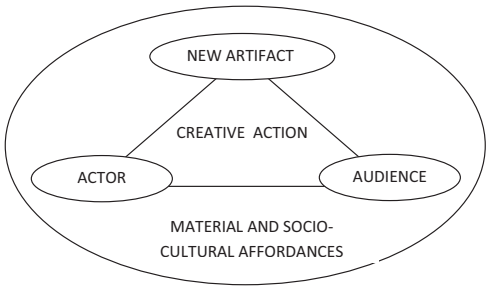

Figure 2. Integrating the five A's of creativity.

within a physical, social, and cultural environment. In the end, this environment and its affordances are also gradually transformed by creative action because the schema presents a dynamic integration of the five A's: actors, audiences, and affordances in interaction, dependent on properties of local settings that are themselves part of the creative cycle. Before discussing each of the five elements, it is important to mention finally that they are not meant to revise the history of the discipline. We are not, for instance, to call "actor" what we called "person" before. The present framework aims to offer an alternative position for writing and thinking about creativity, one that could transform creativity research and lead it toward a truly systemic and situated theoretical model.

From Person to Actor

The actor is a person embedded in the field of social relations specific for any human community and society. Referring to actors acknowledges people as socialized selves, as beings that are shaped by a sociocultural context and act from within it, in coordination with others, to change and mold this context in suitable ways. Therefore, an actor is simultaneously learning and performing societal scripts and being an agent, active in relation to these scripts and in relation to other actors. Such are the insights afforded by sociocultural psychology regarding the development and functioning of the person. Following Markus and Hamedani's (2007) formulation, "people exist everywhere in social networks, in groups, in communities, and in relationships" (p. 4). This reality either escaped or was stubbornly ignored by creativity researchers interested in the personality or cognitive profile of the creative person. Making a list of traits or cognitive factors, for as comprehensive as it may be, tells us nothing about how people come to acquire those traits, how they might employ them in relation with other people, what happens when the social environment is favorable or adverse to a certain set of personal characteristics, and so forth. Above all, this research is usually silent about how these features help people perform their roles in their respective groups. Moreover, it is often forgotten that "the act of a man creating is the act of a whole man" (Bruner, 1962, p. 18) and not of a certain personality constellation or cognitive style.

Unfortunately, in the psychology of creativity, research on the creative person has worked to the exclusion of the social context surrounding the person. By focusing on the individual, any background element became secondary and so did the many ties connecting people with their specific situations and ways of living. Although the study of biographies or autobiographies prevents this to a certain extent, current practices of testing large samples, measuring and comparing personality, intelligence, and creativity scores, completely abstracts the person from his or her context (Amabile, 1996). The participant undergoing psychometric testing is considered to be the "average", rather "universal" subject, and this takes away both individuality and recognition of particular life situations. The rise of the individual and its prominence over context has in any case a longer history in psychology and even beyond it. The study of creativity embodied this concern through a persistent fascination with the image of the genius or the extraordinary person. Both strands of Romanticism and Enlightenment contributed to the "elevation of the individual self" (Weiner, 2000, p. 78), but the origins of the eminent creator are found in earlier times, from the Renaissance onward (Montuori & Purser, 1995). A genius is traditionally the prototype of the exceptional person who does not only override mundane social relations and realities but unavoidably fights against them and against society's drive toward uniformity and stability (Glăveanu, 2010). The genius might be a major actor of creative production, but it is an actor standing alone on stage, a misleading image that transformed our imaginary of the "truly" creative person for centuries.

In contrast to the description above, the actor I am referring to here is necessarily defined by a system of social relations and cultural traditions regulating these relations (see Figure 2). No creator was ever born outside such an environment given that the existence of other actors is essential for the mere recognition of a creative act (we can be reminded at this point about consensual definitions of creativity; Amabile, 1996). Furthermore, individuals are socialized to create and need a considerable amount of time to learn and practice the actions expected of them before making clear contributions to the knowledge and practices of the group. In the words of Csikszentmihalyi (1999), "one must internalize the rules of the domain and the opinions of the field, so that one can choose the most promising ideas to work on, and do so in a way that will be acceptable to one's peers" (p. 332). This also resonates with the 10 years' rule postulated for any major creative achievement (Gardner, 1993). We should consider as well the fact that "scripts," norms, and practices are changed in more or less minor ways while being learned or internalized. The constant generative power of social actors rests in their capacity to be selective and constructive in engaging with any cultural material (Valsiner, 1997). Choices and personal preferences are certainly not excluded from the paradigm of sociocultural psychology and the individual self "using its capacity for reflection and for envisaging alternatives, escapes or reevaluates or reformulates what the culture has on offer" (Bruner, 1999, p. 110).

To conclude, "switching" from person to actor is consequential for the way in which we come to understand and study this actor and his or her life and work. It reminds us of the fact that personal structures cannot exist outside of social structures and the latter owe their dynamic transformation to the former. The actor approach has other implications as well. It makes creators much more active and responsible for promoting their creations (Kasof, 1999), thus integrating the persuasion factor referred to by Simonton (1988). This is also in line with the investment view according to which creative persons buy low and sell high, meaning they adopt unusual ideas, then actively try to convince others of their value, and afterward move on to a new "investment" (Sternberg, 2006). A focus on actors' roles in relation to particular fields of cultural production can thus enrich our understanding of individuals and

their behavior (Moran, 2009). Finally, it is to be mentioned that although a contextual framework tries to correct our bias of focusing exclusively on the person, it does so without being anti-individual (see Montuori & Purser, 1997). Creativity relies on the individual, but "individuals are also ineluctably social and cultural phenomena. The option of being asocial or acultural, that is, living as a neutral being who is not bound to particular practices and socioculturally structured ways of being, is not available" (Markus & Hamedani, 2007, p. 5).

From Process to Action

"To create is to act in the world, or on the world, in a new and significant way" (Mason, 2003, p. 7). The focus on psychological and more specifically cognitive processes in the case of creativity helps us capture an essential part of its manifestation but nevertheless one single aspect of it, leaving it unconnected to the whole: the act or action of creation. Embedding the creative process within the broader concept of action means acknowledging the double nature of creativity: an internal, psychological dimension and an external, behavioral one. What the notion of human action signifies is the interconnected aspect of these two facets and the fact that one cannot be reduced or properly understood without the other. The psychology of creativity, by adopting the language of the creative process, chose to emphasize an internal dynamic, a cognitive one (and not in the sense of the distributed or extended cognition referred to before). This is what Sawyer (1998) also noticed when saying that "psychologists who study creativity have usually separated ideation, divergent thought, and insight on the one hand and execution, implementation, and performance on the other" (p. 11). The related sociocultural notions of action and activity are meant to integrate and study the coordination between these dimensions and locate creative action between actors, audiences, and artifacts (see Figure 2). Action is both psychological and material, internal and external, goal directed, structured, and symbolic or meaningful. Above all, "human action necessarily is situated; it occurs in a context" (Ginsburg, 1980, p. 333). Unlike previous conclusions about the creative process that often postulate its almost "universal" nature, a study of creative action requires us to pay increased attention to the domain of the creation, the characteristics of the creator, and features of the situation.

Applying this conception of action to an understanding of the creative process would enrich not only the psychology of creativity but also the theory of action itself. There are many possible bridges between creativity and action and perhaps the most obvious one has to do with the goal-directed nature of activity and the "intentional" definition of creativity. In their study of creative achievements, Gruber and Wallace (1999) emphasized the importance of purposeful behavior as a criterion for creativity, alongside novelty, value, and duration. Indeed, creativity came to be described by some as a form of goal-directed activity (Weisberg, 1993) in a way that resembles definitions of human action. This postulate of intentionality is not in any case meant to exclude moments of subconscious incubation of ideas or habitual action (see Glăveanu, 2012a), but integrate them into a broader context of acting in the world in order to achieve particular goals. In the words of Boesch (2001), "goals are overdetermined, that is, they spring from different motivations, and therefore they are also polyvalent, that is, they promise to satisfy different expectations" (p. 480). It derives from here that understanding an action does not stop at inferring goal X as a means of explanation but also uncovering the "meaning" it has for the actor in a particular situation. This symbolic aspect relates to the cognitive dynamic of the creative process, and it is here that we can observe the tight connection between a study of creativity as action and as a psychological process.

Unfortunately, this interest rarely comes to the forefront of creativity research despite its obvious benefits particularly for analyzing creative acts with a very rich behavioral dynamic such as artistic work. To illustrate these benefits, I take a classic example, namely Dewey's (1934) series of lectures on "art as experience." Pragmatism is a well-known and influential psychological and philosophical school whose representatives developed a keen interest in human action and activity (Joas, 1996; Miettinen, 2006). John Dewey captured this creative quality in art in his astute description of artistic work: "As we manipulate, we touch and feel, as we look, we see; as we listen, we hear. The hand moves with etching needle or with brush. The eye attends and reports the consequence of what is done" (p. 51). Action in art reveals itself as an intimate coordination between hand and eye, movement and perception, doing and undergoing what has been done. For Dewey, art is a "developing process" (p. 116) and a vision (the goal) perfected not in a mechanical way but through trial and error, through observation and adjustments made to one's course of action. He stressed the reciprocal relationship between ends and means in activity and the fact that goals can be shaped by the means available to the artist while means are discovered in accordance to desired ends in a moment-to-moment dynamic (Joas & Kilpinen, 2006). Most important, his description from the first half of the last century resonates widely with more recent scholarship both from within creativity and cognitive theory. The continuous cycle between doing and undergoing in action postulated by Dewey reminds us of the action–perception loops studied by subsequent generations. It also argues for the notion of distributed cognition by proposing that information exists neither "inside" nor "outside" the person but "in between" perceiver and environment.

Moreover, the action and perception, doing and undergoing phases have an uncanny resemblance with processes of generation and exploration considered to compose creative production (Finke, Ward, & Smith, 1992). Reformulating the latter in light of the former would achieve a broader framework of creativity and open it up to elements beyond the person of the creator. What both conceptions are in any case keen to emphasize is the dynamic and cyclical nature of these stages in the act of creation. Unlike more linear formulations of the creative process, action-inspired theories are in perfect agreement with findings from a series of studies of artistic creativity. Getzels and Csikszentmihalyi (1976) clearly stated that art does not proceed through an organized forward movement but through an interrelation of finding, constructing and solving problems. Similarly, for Mace and Ward (2002), artwork conception, idea development, making the artwork, and finishing it is a complex process with continuous feedback loops between stages and under the influence of numerous external and material constraints. Other recent empirical studies (see Botella, Zenasni, & Lubart, 2011; Kozbelt, 2008; Yokochi & Okada, 2005) sediment this view and come to confirm Dewey's (1934) original intuition. These accounts can also be taken as a starting point for what, in the future, could become a systematic description of creative action or activity.

From Product to Artifact

One traditional perspective on human activity, originating from the work of Lev Vygotsky (1997), considers the developmental and microgenetic dynamic of internalization and externalization (see Engeström, 1999, p. 33). The child as well as the adult proceeds in interacting with the world by adopting and learning a series of cultural models and behavioral patterns and then expressing the outcomes of this internalization in an ever advancing cycle. As observed by Moran and John-Steiner (2003), what Western psychology takes to be creativity is largely the externalization process in a Vygotskian framework. "Externalization is the construction and synthesis of emotion-based meanings and cognitive symbols. Once expressed, these meanings and symbols are embodied in cultural artifacts—creative products—that endure over time to be used by future generations" (Moran & John-Steiner, 2003, p. 63). What the two authors do not emphasize above is the conceptual distance between cultural artifacts and creative products. In my brief presentation of the four P's of creativity, I argued that products are often considered in isolation not only from the processes leading up to them and the sociocultural context fostering their creation but from the person of the creator as well. When we analyze a product, we can measure its physical properties and/or notice whether it is considered creative or not by a group of (expert) judges, but this will not tell us anything about the origin and functions of the product in question. It is only when adopting a sociocultural epistemology that we are compelled to conclude about each and every creative outcome, for as minor as it may be, that it is equally a product of cultural participation and thus an artifact or cultural "object" (Glăveanu, 2011b). *Object* is used here in quotation marks because artifacts are not only material but can also be conceptual and, at times, can even take the appearance of an action or performance (Sawyer, 1997; also Cropley, 2006).

Referring to products as artifacts draws attention to their "cultured" nature and the cumulative character of creation in human groups and societies. Indeed, unlike products, artifacts can never stand alone. In a sociocultural conception of creativity, "each creation comes into being, is understood, and is valued as part of a larger web of relations of people, things, institutions, and beliefs beyond that particular creation" (Weiner, 2000, p. 254). We exist in a world of accumulated artifacts and their use reveals the mediated quality of action discussed in the previous section and reflected in Figure 2. It is interesting to observe that even when physical objects are not used in one particular stage of a creative act, this does not imply the acultural nature of that stage: Our conceptual thinking is grounded in the use of words and notions, and language itself is a classic example of an artifactual product in the history of civilization. The act of creativity therefore is never one of complete breaking with the past but is necessarily continuous with what existed before in more or less obvious ways (Weisberg, 1993). This transpires from established definitions of creativity. In the words of Barron (1995), "the human act of creation, basically, is a personal reshaping of given materials, whether physical or mental. What is new is form transformed; a new form, generated from an old one" (p. 313).

This observation is by no means inconsequential. "The artifacts of creative work are available to the person who desires to make further changes in the world" (Feldman, 1988, p. 288). What would creation be outside the objects, models, and technologies of our contemporary cultures and societies? Finally, there is another sense in which adopting the notion of artifact over that of product reveals its theoretical benefits. An artifact has a double nature, both material and ideal or conceptual (Cole, 1996). As such, artifacts do not exist only because of their physical presence but primarily because they carry meaning and are the object of meaning-making activities that require interpersonal interactions. Continuing with the example of artistic productions, they have more than a visible, material nature - they also "demand interpretation" (Zittoun, Duveen, Gillespie, Ivinson, & Psaltis, 2003, p. 429). The mainstream literature on creativity, notwithstanding the consensual assessment technique, regularly pays little attention to what the creative product actually means, what it is meant to achieve, what kind of conception about creativity informs our judgments about it, and so forth. The efforts to understand, to interpret novel works goes a long way in real-life contexts beyond assigning them a simple score for originality, utility, creativity, and so forth. Every work of art, we are reminded by Eco (1989), "is effectively open to a virtually unlimited range of possible readings, each of which causes the work to acquire new vitality in terms of one particular taste, or perspective, or personal performance" (p. 21).

In conclusion, the present material supports Lubart's (2003) assertion that every cultural object is a product of creativity. Furthermore, it states the reverse is also true. If creativity generates artifacts and these are "the fundamental constituents of culture" (Cole, 1996, p. 144), then the study of this phenomenon represents a key concern not only for psychologists but social scientists at large. In forging these interdisciplinary links, I advance the proposal of referring to creative products as artifacts, a relational notion able to connect creators and audiences, creative outcomes and creative actions. When Vygotsky's insight that "existing tools and symbols are the fossilized thought and ideas of people who have come before in history" (Moran & John-Steiner, 2003, p. 79) is taken to its last consequences, a new image of historical continuity emerges, one in which creativity plays a central, determining role in the course of cultural evolution.

From Social "Press" to Audience

The fourth and last P in Rhodes's (1961) framework addresses the relation between person and environment understood predominantly as a social environment. The term itself is quite difficult to grasp and suggests the "pressing" influence of others and society over the creator and his or her work. In the five A's framework, press is "divided" between audience and affordances (see Figure 1) to deal better with the complexities of creating in a simultaneously social and material world and relating creative actors to both other people and objects from their environment. The concept of audience is preferred to deal with social forms of press because it turns the notion from abstract and less intuitive into a vivid image of multiple others assisting, contributing, judging, criticizing, or using the creative act and/or resulting artifact(s). Audiences are numerous for each and every creator, they range from potential collaborators and family members to opponents and colleagues and finally, in some cases, to the wider public that will ultimately receive, adopt, or reject the creation. At any rate, as my discussion of actors, actions, and artifacts has revealed already, others play a key role in the process of creativity being very often a determinant as important as the creator him- or herself. This role is so vital that

most complete definitions of the phenomenon do not forget to mention the "inherently communal" nature of creativity judgments (Gardner, 1994, p. 145). In the words of Negus and Pickering (2004), an action "is never realized as a creative act until it is achieved within some social encounter" (p. 23). This strong constructionist perspective was championed in the psychology of creativity by Mihaly Csikszentmihalyi (1999), who formulated the radical argument, supported here by my proposed model, that "what we call creativity is a phenomenon that is constructed through an interaction between producer and audience" (p. 314). Audiences play the vital role of evaluators and thus come to constitute what is called creative in our communities and societies, but this is not the single contribution audience members make to the phenomenon of creativity.

Audiences in a sociocultural understanding are both active and multiple. This means on the one hand that creators interact with a diversity of people in performing their activity and, on the other, that these people are always involved in the emergence of new artifacts (see Figure 2). It is easy to argue that all actors who contribute to the creation in one way or another (for instance, the collaborators of the creator) become part of the creative activity, but what about the seemingly passive general public? Are people simply observing or being introduced to a creation just as active in their engagement with it? To answer this, I rely on authors such as Umberto Eco and John Dewey, two thinkers who carefully considered the relation between creations and audience members. "Each 'reading,' 'contemplation,' or 'enjoyment' of a work of art represents a tacit or private form of 'performance,'" said Eco (1989, p. 251), suggesting the similarity between acts of creation and perception. In a similar vein, Dewey (1934) noted that "to perceive, a beholder must create his own experience. And his creation must include relations comparable to those which the original producer underwent" (p. 56). Although he was quick to clarify that such relations are not in any sense literal, there is a reasonable parallel to be made between the initial construction of meaning embodied in a creative artifact and subsequent meaning-making processes around it. There is "work to be done" on the part of both perceiver and producer, as Dewey concluded.

This assertion about the active nature of audiences can be taken further if we consider that creative actors are also audience members for the creations of others and vice versa (Glăveanu, 2011b). In fact, as previously argued, creative work requires (sometimes lengthy) periods of internalization, of learning or appropriating the artifacts, beliefs, and norms of one's cultural environment. The influence of others is so pervasive that creators internalize their position as audience members and use this knowledge and experience when generating further artifacts. Through adopting these theoretical lenses, we can gain a critical understanding of the popular image of solitary creation. Storr (1988) made an argument, for instance, that thinking is a predominantly solitary activity and the majority of creative pursuits do not actually involve relationships; on the contrary, they require isolation in the same way as meditation and prayer do. Although solitude can be indeed favorable for some, I contend based on the above that solitude itself does not equate with an asocial or antisocial situation. The most secluded creator still exists in a world of others and needs the interaction with different audiences for inspiration, for support, for appreciation and use of resulting artifacts. Dewey (1934) plainly stated in this regard that "the artist embodies in himself the attitude of the perceiver while he works" (p. 50) and, during creative activity, "the artist has to become vicariously the receiving audience" (p. 111). Even when working in solitude, the audience is ever-present and a creator necessarily learns to observe and understand emerging outcomes as a third party would. Missing this form of detachment and social sensitivity would make creative action impossible or, in any case, less successful.

Creativity is thus a dialogical process (Grossen, 2008), one that occurs within the context of relationships (Barrett, 1999). In the words of Collins (2007), "the intensely focused thinker (. . .), is oblivious to the immediate surrounding world because he or she is entrained in the internalized conversations of the network; creativity is a process of making coalitions in one's mind" (p. 162). This is obvious both in the case of scientific (Collins, 2007; Schaffer, 1994) and artistic creative work (Becker, 2008).

From Material "Press" to Affordances

The existence of a material or physical press was rarely acknowledged by creativity researchers and psychologists at large. This is quite surprising considering the fact that creation is not only a psychological function but also a form of action deeply embedded in the material world (something also captured by Figure 2). The assertion above is valid not only for art and design but also for the most seemingly "mental" activities; even poets rely on a physical environment to be stimulated, inspired and capable to write, edit, and publish their work. Material objects both constrain and allow creative action in ways that deserve further investigation. This influence is not specific for only the initial and final stages of the creative process (preparation and verification), but it is key to the actual shaping of a novel idea. We are reminded here of Bruner's (1962) discussion of objects and their significance for creative work. He coined the paradoxical expression of "freedom to be dominated" while creating, by the object being created, and considered that "it is at this point that we get our creative second wind, at the point when the object takes over" (p. 25). With this, Bruner argued against a mechanical vision of creativity in which the author simply reproduces a preconceived idea in working on an object and does not allow the material support to guide his or her action.

Sociocultural psychology is particularly sensitive to these ideas and several authors within the discipline addressed the various ways in which objects "channel" our action: "Spatially they determine where and how we can move; instrumentally they determine what we can do" (Boesch, 2007, p. 162). According to this perspective, objects structure our world and action within it. They thus serve a variety of purposes, for example, material–instrumental, functional, communicative, and symbolic (Boesch, 2007, p. 164), and these come into play at different moments during creative production. Objects are equally important for the conception of Richard Shweder (1990) and his notion of intentional worlds. For this author, "a sociocultural environment is an intentional world" (p. 2) and "cultural psychology is the study of intentional worlds" (p. 3). Within it all, objects have a culturally constructed meaning and gain their "existence" by responding to certain human needs and being integrated in certain activities. The intentional world is a world arranged as such to provide people with meanings and resources ready to be seized and used in

particular ways. This readiness has been conceptualized best within the related strand of ecological psychology.

The theory of affordances offers a fruitful theoretical lens when it comes to appreciating the relationship between a subject and the surrounding objects of the material environment. In Gibson's (1986) formulation, "the affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (p. 127). Gibson invented this notion to designate a reality that does not "belong" to the animal or the environment alone but to their interconnection. He argued that what is afforded by an object in terms of human action is a relational feature. As such, what we perceive in our environment are affordances and not qualities, we pay attention first to what can be done with an object rather than how the object is. "Affordances are opportunities for action" (Stoffregen, 2003, p. 124), "the actions permitted an animal by environmental objects" (Michaels, 2003, p. 146), and a study of one is impossible in the absence of the other. Moreover, the same set of affordances will not become apparent for all people at all times. To discover and fully exploit existing environmental potentials, an actor needs to possess certain knowledge and set of abilities. For instance, a piece of heavy iron has the affordance of being lifted but only by people who are strong enough to perform such action. These observations reveal some intriguing perspectives for the study of creativity. A creative actor is arguably one able to exploit the affordances of his or her surroundings in an innovative way, to discover new affordances, and even "create" the ones needed to fulfill a specific action (Glăveanu, in press). Following the same logic, an object is open to a great number of uses ranging from conventional to highly creative. In the words of Gibson, "the fact that a stone is a missile does not imply that it cannot be other things as well. It can be a paperweight, a bookend, a hammer, or a pendulum blob" (p. 134). This, in the end, is the principle behind the Unusual Uses Test so popular in the psychology of creativity.

What is less obvious from Gibson's (1986) discussion of affordances but comes to the fore in a sociocultural presentation of the concept is the fact that both affordances and the abilities needed to exploit them are culturally selected and "evolve" over phylogenetic and ontogenetic time. The potential for creative use of objects therefore is not a preset reality but a transforming one, changing as actors discover new potentialities in their environment and shape it in desired ways. At the same time, the use of objects shapes the developing capacities of human beings as they grow and become competent users of their environment. Ernest Boesch (1993) demonstrates these deep, evolving connections between objects and people in his essay "The Sound of the Violin." In this short piece, he invites readers to consider the "phylogenesis" of the violin, its evolution as a species of musical instruments, as well as the "ontogenesis" of the violin or how it becomes from a mere object, one that is intimately connected to the person of the violinist, an instrument to be played. While phylogenetically the object is made to "fit" human needs and desires, ontogenetically the individual necessarily starts by trying to "fit" the characteristics of the object. This describes also the developmental trajectory of creativity: first becoming able to observe and make use of affordances in the surrounding environment and then mastering this use and altering affordances, adapting what already exists and creating new artifacts with new affordances.

The "So What?" Question

The five A's framework of actor, action, artifact, audience, and affordances has been proposed here as a conceptual alternative for the classic four P's of creativity, namely person, process, product, and press. There are many similarities but also marked differences between the two frameworks. To begin, they consider almost the same set of elements (except for affordances, an addition meant to focus our attention on the role of the physical environment) and therefore propose a multidimensional, multifaceted vision of creativity. However, as I am trying to argue here, using the five A's framework would be the equivalent of a symbolic "rewriting" of our language when it comes to creativity. The new language suggested above draws inspiration from sociocultural sources, recent developments in cognitive science, and the legacy of ecological psychology to resituate the creator—the actor in our formulation—in a broader context of material, social, and cultural phenomena and relations.

The language of the five A's framework is one that provides, in my opinion, more conceptual unity to the study of creativity and a better integration of its fundamental elements. Indeed, as repeatedly emphasized, the five elements "require" each other and cannot be understood in isolation. Figure 2 depicted this interdependence between the five A's outlined above. Actors "need" the conceptual pair of audiences, action results in artifacts and exploits environmental affordances, and so forth. This is already an important step forward compared with the four P's and the rather disjointed scheme they postulate. Also important to notice is the fact that whereas Rhodes (1961) derived his conception from a study of definitions (and therefore his original aim was to organize the diversity of formulations), the five A's aim is not to structure an existing body of theoretical and empirical work so much as to inspire its development. It has been repeatedly noticed in the psychology of creativity that only systemic models can save the field from fragmentation and excessive specialization (Hennessey & Amabile, 2010) and return it to the greater concerns about the nature of creativity. Although this in itself can be for many a sufficient reason to look for alternative frameworks, I am compelled, at the end, to address the "so what?" question in relation to my specific proposal and will do so with reference to theoretical, methodological, and practical considerations.

At a theoretical level, the five A's model is associated with a relatively novel understanding of creativity. Although the elements of this framework did not emerge out of a study of definitions, they nevertheless can be used to formulate a tentative, sociocultural description as follows: Creativity is concerned with the action of an actor or group of actors, in its constant interaction with multiple audiences and the affordances of the material world, leading to the generation of new and useful artifacts. This definition builds on existing formulations (see, for instance, Plucker, Beghetto, & Dow, 2004, p. 90) in ways that "translate" and enrich their meaning for those researchers interested in the sociocultural and systemic qualities of the phenomenon. Discussing creativity in terms of actors, actions, artifacts, audiences, and affordances is different from focusing on aptitudes, processes, products, and the environment: The former set clearly emphasizes the distributed nature of creativity and its articulation in concrete sociocultural settings; the latter focuses on rather disparate personal and social aspects of the phenomenon. Moreover, each of the five terms presented in this

article can introduce novel avenues for creativity theory and research and even open entirely new fields of study (e.g., the role of affordances in creativity).

This framework has another theoretical advantage in that it is well equipped to capture different levels of creative expression, from celebrated achievements to everyday experiences. The distinction between "high" and "mundane" levels of creativity is pervasive in the existing literature (see Boden, 1994; Cohen & Ambrose, 1999; Craft, 2001). Such distinctions are valuable at an analytical level and can help differentiate extreme cases of the phenomenon but fail to do justice to a whole world of "in-between" instances. The five A's framework is able to capture this diversity by being sensitive to such differences while working with a unitary terminological and conceptual model. Everybody is a potential actor in the field of creativity, from people who cook a sophisticated meal at home to world-class scientists ready to make a new discovery, both artifactual productions in their own right. There is creative action taking place in both cases and an analysis of its structure and characteristics would certainly reveal many differences but also potential areas of similarity (e.g., the cook and scientist may equally adopt a trial-and-error, experimental strategy, etc.). Finally, the sets of audiences and affordances every actor interacts with are different (the cook will present his or her work to family and friends, the scientist to a community of peers, etc.), but both place the creator under a series of constraints and privilege certain actions over alternatives. This capacity to theorize each of the five A elements at different levels is a quality that systems models of creativity, for instance, do not seem to have. In Csikszentmihalyi's (1988, 1999) view, for example, the field and domain are socially constituted and refer strictly to institutionally recognized forums (e.g., museum curators, art critics, scientific committees, etc.). This excludes more "modest" forms of creative expression such as children's drawings by not acknowledging the fact that audiences are multiple and range from gatekeepers of a domain to parents and teachers (see Glăveanu, 2011a).

The five A's framework, just as the four P's, can also be a useful methodological tool. Murdock and Puccio (1993) used Rhodes's conception and particularly his intuition about the overlap between elements to propose the *contextual organizer*. This methodological instrument, aiming "to assist researchers in designing and conducting integrated research" (p. 250), stresses the importance of studying person, process, product, and press in conjunction rather than in isolation. This, according to the two authors, generates a "contextual" understanding whenever we are able to interrelate the four facets of the phenomenon (Isaksen & Puccio, 1993, refer to it in terms of "profiling" creativity). A difficulty, of course, rests in how to operationalize the four P's in research in order to be able then to relate findings about each of the four elements. This challenge is partially resolved in the five A's framework because of the interrelated meaning of actors and audiences, actions, artifacts, and affordances, made reference to above. The fact that a study of actors necessarily invites a reflection on the role of audiences or that action only takes place in relation to both audiences and the affordances of material objects is certainly aiding the development of "contextual organizers." The aim formulated by Murdock and Puccio is equally valid for the five A's model: "Using a 4 Ps framework with a contextual focus provides definition and direction, yet allows for in-depth focus on any one, all, or any combination of the major strands" (p. 266).

Moreover, from a methodological perspective, the study of actors, actions, artifacts, audiences, and affordances, both separate and in conjunction, requires innovations at a design and research technology level. Two examples are discussed here: action and artifacts. For the former, the greatest difficulty is to be able to capture and articulate the "inner," psychological, and "outer," behavioral dynamic of creative action, something that cannot be achieved by traditional methodologies such as individual self-reports or product analysis. Observation is certainly a privileged method, but it is costly in terms of time and often problematic when it comes to capturing microgenetic changes and work on small objects. These issues can be addressed by methodological innovations such as the use of subjective cameras within a Subjective Evidence-Based Ethnography (for details see Lahlou, 2011). A subjective camera is a miniature device worn at eye level to record activity (both audio and video) from the perspective of the actor and thus offers a situated account of what the person does and perceives while creating. This technique has been applied recently for the first time in the field of creativity research (Glăveanu & Lahlou, 2012) and promises to advance our understanding of creative work in its moment-to-moment development by being able to document, in detail, everyday life practices within their material and social context. Second, when referring to a study of creative artifacts, it has been noted that current techniques are overconcerned with the measurement of properties and evaluation of creativity and fail to consider artifacts in the broader context of meaning-making processes taking place between actors and audiences in particular sociocultural settings. For instance, Ivinson's (2004) research showed how artistic outcomes made by students gain different meanings as they pass from one environment to another (e.g., school to home) and are presented to different audiences. The consensual assessment technique (Amabile, 1996) can mask this diversity through an excessive emphasis placed on consensus and homogeneity. A multiple feedback approach (Glăveanu, 2012b) is, on the contrary, designed to uncover the multiplicity of conceptions around novel artifacts specific for different cultural groups and communities.

Finally, the five A's framework has a number of practical advantages, and the most important of all here is the fact that it can be directly applied to a series of domains such as art, science, organizations, education, and so forth. Many of the examples given in this article cover artistic and scientific creativity and demonstrate how a discussion of these traditional fields can be (re)formulated in terms of actors, actions, artifacts, audiences, and affordances. They equally apply to a business environment in which creative actors interact with a series of audiences at different levels of the organization, produce numerous artifacts, both tangible and intangible—from written reports to novel solutions—and, in doing so, exploit the affordances of the physical environment—from the latest technology to conference rooms and office buildings. An educational environment (e.g., a school) shows interrelations between the same key elements: actors and audiences (students, teachers, administrative staff, parents, etc.), actions (teaching, learning, extracurricular activities, etc.), artifacts, and their affordances (educational resources, student work, etc.).

Moreover, the five A's and the sociocultural, systemic perspective they endorse is helpful in clarifying theoretical arguments of great practical importance. One of these is the debate over the domain-specificity versus domain-generality of creativity (see

Baer, 1998; Plucker, 2005; Silvia, Kaufman, & Pretz, 2009). An advocate of the situated nature of creative expression, the model proposed here is well equipped to capture the local and specific manifestation of creativity in different domains and, more than this, in microlevel contexts and situations. Actors are developing individuals, action is necessarily connected to the here and now of relations to audiences, and physical objects or artifacts gain meaning locally and contextually. And yet there is also scope for observing generalities among different concrete instances. To take the example of creative action, it is clearly situated and inseparable from the context of its production, but it also reveals regularities due to an internal organization of elements (e.g., operations, actions, activities, goals and motifs, mental representations, etc.) that can resemble, for instance, in the case of an artist and a designer, a designer and a scientist, and so forth (see Glăveanu & Lubart, 2011, for a study of action in five creative domains). The observations above are in line with current propositions concerning the combined "general" and "specific" nature of creative activity (e.g., Baer & Kaufman, 2005).

In the end, the five A's framework is not intended to offer definitive answers about the nature of creativity because, just like the four P's model, it does not specify any exact relations between actors, actions, artifacts, audiences, and affordances. These are meant to be discovered in research, not postulated in advance. At the same time, more than the four P's, this framework is capable of guiding research and suggesting new questions about creativity that were previously ignored or unnoticed: How do actors interact with audience members and become themselves "audiences" for their own productions? How is creative action altered by the affordances and the constraints of different domains? How can we expand further what our environment affords, and what role does creativity play in this process? What shapes the historical development of creative artifacts?

Concluding Remarks: Creativity and Culture

"Creativity is not a rootless flower," claimed Barron (1995, p. 9) in a book dedicated to the ecology of creative expression. For Barron, the roots of creativity can be found in the simultaneously natural and social world in which creators live, work, and innovate. The five A's framework follows the same line of reasoning and proposes a new language of creativity in which actors act as part of a wider environment made up of audiences, artifacts, and their affordances. Because this is largely a sociocultural approach, a question might be raised as to why culture itself (or associated notions such as norms, beliefs, traditions, conventions, etc.) does not find a distinct place within this conceptual schema. To be sure, the reason does not have to do with the terminological difficulty of producing a perfect alliteration but with the ontological and epistemological assumption that culture, as an accumulated system of symbolic and material human creations (Cole, 1996), cannot be separated from actors, actions, artifacts, audiences, and affordances. In other words, all five A's fundamentally exist and make sense in a cultural universe, and to produce a framework that isolates "culture" outside of (even interacting with) all the other facets would contradict this basic premise.

The five A's offer a "cultured" or "socialized" version of the four P's and, as such, help this critical classification in psychology relate to other scientific disciplines interested in exploring the same phenomenon. There is research on creativity outside of psychology, and making connections with these growing fields from sociology, anthropology, or the natural sciences is long overdue. Sociocultural psychology started as a multidisciplinary project and can thus constitute a solid base on which to build a model of creativity that is in dialogue with advances in cognitive sciences, evolutionary perspectives, and the social sciences at large. In forging a new language of creativity, we must consider not only how well this language can help us integrate past and present findings in our discipline or inspire future developments but also how it could help us speak to a broader audience.

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